The Builder.

VOL. XIX.—No. 953.

Architecture at the Royal Academy.

OUR readers have been informed of the changes made at the National Gallery, including those in the rooms occupied by the Royal Academy. The staircase, they will remember, has been brought nearer to the front, and opens into what was known as the Miniature Room; while the corridor into which it formerly opened, and the Architectural Room, have been thrown into one, and form a handsome apartment. The effect of the hall is not good, the staircase not being in the centre. The entrance to the new Sculpture Gallery, too, is somewhat awkward. We must put up with this, however, for the sake of the improvement in the latter. A tasteful decoration of the wall in the hall, which comes nearly close up to the staircase, might be made to lessen its present disagreeable appearance. The Sculpture Gallery is a great improvement upon the old cellar that heretofore did duty; but the lighting needs reconsideration and arrangement. Besides a large window at the end of each of its three divisions, the vaulted roof of the central (and main) compartment is of glass; and the result is so general a diffusion of light that we look in vain, in most instances, for those shadows on which the effect of sculpture so much depends. Probably it would be found useful to cover the glass in the roof up to within a few feet of the end, where the window is. The latter was at first filled with ground-glass; but this has been removed, and clear glass substituted, with considerable advantage. The walls of the gallery are coloured lilac. The whiteness of the floor is objectionable; but this can be easily remedied by means of drugget or paint. The cast of the Farnese Hercules, which followed the Academy from its old quarters in Somerset House, is close to the steps leading down into the gallery; and, being the last thing seen before entering, it seems to have the effect of dwarfing the modern works.

The collection of sculpture is of more than average merit; or, at any rate, asserts itself more vigorously than usual with increased light.

Going up-stairs we find that the hangers have appropriated the new room (formed, as we have said, out of the corridor and the old Architectural Room, and now called the North Room), to architectural works, and other drawings in water-colours and chalks. The former occupy one side of the room, and a half side, and are seventy in number. These are mostly set forth in well-finished drawings; and we may suppose that, architects now having an exhibition of their own for the complete display of architectural and building progress, the Academy will confine itself to hanging works which, either as designs or drawings, display *art*. Nearly half of those now exhibited are unfortunately hung so high, and reflect light to such an extent, that they cannot be seen, much less can they be judged of. A number of the buildings represented, as a matter of course, have been already described and illustrated in our pages; for example (667), "Bodelwyddan Church, near St. Asaph: View of the Chancel," J. Gibson (an elaborate drawing); (691) "Victoria Military Hospital that [costly error], on the Banks of the Southampton Water," F. A. Dovey; (694) "The new Chapel, Exeter College, Oxford," J. H. Le Keux; (696) "Manchester Assize Courts, now in course of erection," M. Waterhouse; (692) "Views Illustrative of Gothic Designs for the Government Offices," G. G. Scott, R.A.; (703) "National Schools, Endell-street, St. Giles's, E. M. Barry, A.; (715) "The Hartley Institution, Southampton," now in course of erection," by Messrs. Green & De Ville; and various others. Mr. Scott's drawings, very large and comprehensive, may be taken, we suppose, as a sort of appeal to the public as against his own Italian design for the Government Offices, which has been accepted by the Minister, and is about to come before the House of Commons. Under Mr. E. Barry's view of the Bloomsbury schools he gives an interior view and a sketch of the very picturesque arrangement of the upper part of the back of the building. The same architect also sends a view of the "New Opera-house about to be erected at Malta" (666). The front is recessed above the basement to form a portico with four Corinthian columns between the wings, terminating with the entablature. The wings have each a detached column at each angle, carrying seated figures, as at the Taylor and Randolf galleries, Oxford. Mr. Ferrey sends "Killyleagh Castle; a Restoration of the Gateway and Outworks" (661); "Bulstrode, a seat of the Duke of Somerset, now erecting" (693), a neat Ferreyian Tudor residence, of large size; and "Wynnstay, a Seat of Sir Watkins W. Wynn, Bart., now erecting" (705). The latter is in the Italian style, with tower and turrets, and promises to be a fine house. Amongst other residences illustrated are (665) "Part of the Court-yard of Dalzell Castle, Scotland" (656), R. Billings; "Duncrub Castle, Perth" (657), W. G. Habershon (a large structure, of Tudor character, with tower); "Frogmore, near Hertford" (707), W. M. Teulon; "Grafton Manor House, Worcestershire, rebuilding, with the exception of the Banqueting-hall" (710), D. Brandon (Late Tudor in style); and "Mansion erecting at Blackmore Park, Worcestershire" (711), by the same architect. These do not present any strikingly distinctive features, but will take their places creditably amongst the "Homes of England."

The drawings of churches are few in number, and show the general power of dealing with Mediæval forms that now exists. We will name the chief of them. 663, "New Chapel in the Church of the Immaculate Conception, Farm-street," H. Clutton. The interior is richly carved and coloured, displaying marble shafts and wall-paintings. The panels on the wall over the altar take the shape of one centre arch and two half arches, which have an incomplete aspect. 671, "Study for a Chancel," J. Bentley, is a fine drawing, and exhibits good acquaintance with the materials dealt with. 673, "Sketch in Waltham Abbey," W. Burges, shows the new east end, lately executed under his direction, wherein the architect has introduced Early English in connection with the original round-arch work, and without inharmonious results. Mr. Hadfield sends a view of the "Church of St. Peter and St. Paul, Barnby, Devon, now being Restored" (677); and Mr. Pearson internal and external views of "A Church to be built in London," 679 and 681. The two ranges of windows in the chancel suggest an arrangement that does not exist. 704, "Church of St. John the Evangelist, Newport, Monmouthshire," Prichard & Seddon. The style is Geometric: the body of the church is overwhelmed by the tower and spire. 718, "Design for the Church of St. Peter, at Bournemouth, in course of erection," G. E. Street. The style is Geometric. The parts on the north side of the chancel with turret between them look crowded, but the general effect is very satisfactory. "The Church of St. Luke, Tor-Mohun, Torquay," A. W. Blomfield (719), has a site the irregular levels of which aid in a picturesque result. The aisles have a gable over each window, an effective but costly arrangement, enforcing many "down pipes" for the rain-water.

Under the head of suggested public improvements, we may place 664 and 672,—views of proposed high-level road, and viaduct from St. Sepulchre's Church to Hatton-garden, Holborn-hill, F. Marrable; and (706) "a proposition submitted to the Government last session for endowing it with an estate of from 50 to 100 acres, stretching through the heart of the metropolis, by building an open viaduct, with or without locks, on both sides of the Thames, and for forming permanent canals on either side, retaining the water at ebb-tide up to 6 feet below high-water mark, by means of the low-level sewer running through the centre of viaduct," H. R. Newton. The view ranges from Westminster to St. Paul's. The "estate" in question would be environed by water, and we should lose the fine open quays and improved means of transit desiderated. Mr. Marrable's design for getting rid of Holborn-hill does not differ greatly from some others we have seen. Half of the road is continued on a level viaduct, containing shops, approached from the low level; and carrying houses built on the high level. A fitting opening through the viaduct gives access to Victoria-street.

To speak of some more miscellaneous designs. 655, "Villas erected at Roupell Park," J. Taylor, junior. Mr. Taylor, it will be remembered, patented a mode of forming walls with thin facings of either stone or brick, and this drawing is to show the employment of it in conjunction with timbers, forming a half-timbered construction. The advisability of so using timber is more than doubtful. 662, "Interior of Grand Staircase in the Mansion now being erected at Gottenburgh, Sweden," W. A. Boulnois; an Italian design, with galleries round on the various stories. We are glad to find Mr. Boulnois at work so far afield. 668, "The Blind Asylum, Brighton, in course of completion," by S. Clarke. A morsel of the Ducal Palace serves for windows on each floor, and doubtless makes a sufficiently effective front. 680, "Interior of the Council Chamber of the Royal Horticultural Society at South Kensington, capable of being used on state occasions for a Vestibule to the Gardens," designed by Captain Fowke. This is a handsome and spacious apartment, in the Italian style, with flat lights in the roof, a cove round them, and looking-glasses in the angles of the room to give increased effect of size. It is better as a vestibule to the gardens than as a council chamber. 684, "Gallery of Communication lately erected in the Hall at Compton Wynniattes," and 689, "Original Sketch for a Public Building," both by M. D. Wyatt, are pen-and-ink sketches scarcely in fitting trim for their company. 685, "Ceiling of Show-room at Mr. Hancock's, Bruton-street," O. Jones. This is executed in patent canvas plaster, a valuable material used by Mr. Jones in several similar works, and shows his well-known flat foliage. The colour is blue, with white, red, and gold harmoniously introduced. 688, "Design submitted in competition for covering in the area of the Royal Exchange with glass," H. S. Legg. In this iron is used at the top of the building, the centre being filled with glass, and the cove all round ornamented with coloured panels. Without being the best, it serves to show how different the effect would be if the *cortile* were covered at the top of the building from that produed by the wretched arrangement that was threatened. 690, "Kintbury Vicarage, Berks," T. Bury, a good substantial mullion-windowed tile-covered house. 692, "Proposed Grand Hotel *de la Méditerranée*, Cannes," T. Smith & Son. In this drawing, Messrs. Smith show the beautifully situate residences of Lord Brougham, and the late Lord Londesborough (chateau St. Ursule). The proposed hotel is a large building of Italian character, with coupled arches carried on marble columns, in the front of *loggie* on three stories.

It would make a handsome and effective building. Amongst the drawings for hotels in England, there is a view of "the Hotel at Great Malvern, now erecting," E. W. Elmslie, but all that can be seen of it is that it is five stories in height, and has a tower. 709 sets forth a design submitted in competition for the New Houses of Parliament at Ottowa, Canada. It has an enlarged version of the dome and drum at the National Gallery, and is otherwise so ugly that we cannot be sorry it was unsuccessful. The last drawing we can here mention is 920, "A Drinking Fountain," H. A. Darbishire, and this we have fully illustrated and described on another page in our present number.

The dinner at the Royal Academy took place, as usual, on the Saturday preceding the first Monday in May. The President, in the course of his reply to the toast "Prosperity to the Royal Academy," said an exhibition of sculpture, under the direction of the Commissioners of Fine Arts, took place in Westminster Hall in the summer of 1844,—nearly seventeen years since. My Lord Palmerston, referring, in the House of Commons, in July, 1844, to the success of that exhibition, expressed his regret that the space allotted to the display of sculpture in the Royal Academy was so inadequate, and his hope that the subject would receive consideration. In consequence of that remark the late Sir Robert Peel, who was then at the head of the Government, gave some attention to the question; but, although most willing to effect a change, his plans, whatever they may have been, were afterwards unavoidably laid aside. Thus, after so many years, it has been reserved for his lordship, with whom the suggestion originated, to carry into effect an improvement for which the sculptors of this country have reason to be, and are, most grateful. I will only add that, considering the difficulties with which the architect had to contend, the result, on both sides of the building—I had nearly said on both sides of the House—may be regarded as highly satisfactory. The rapidity with which the work has been executed has taken many by surprise. A doubt, I believe, existed among the sculptors whether the room could possibly be ready in time; and this may have induced some to postpone the completion of their works.

Lord Palmerston, replying for "Her Majesty's Ministers," said, the fine arts are not only a source of intellectual enjoyment to the nation in which they flourish; but they are also a measure, in the estimation of other countries, of the honour, of the dignity, of the reputation, of the position of the country to which they belong in the scale of civilized nations. In fact, the office of art is higher even than that; for not only does the artist promote the intellectual enjoyment of his contemporaries,—not only does he raise them in the scale of social existence,—but he perpetuates the records of the age in which he lives, and even of those ages which have preceded; and hands down from generation to generation those memorials of great events, those records of distinguished men, which, being subjected to the faithful eye, are more instructive and more permanent monitors of the greatness and glory of a nation than even those traditions which may be conveyed sometimes to the treacherous and forgetful ear.

The Chancellor of the Exchequer was called on to speak in connection with "the Interests of Literature." Speaking of the connection between literature and art, Mr. Gladstone observed it was never more beautifully illustrated than in the group of the famous Laocoon compared with the not less famous description in the poem of Virgil, and with regard to which literary men for ages argued whether it was the group that suggested the poem, or the poem that suggested the idea of the sculptor. Modern criticism has resolved that controversy, and has determined that both were original, and that the treatment of each was strictly in accordance with the principles of each art,—the name of the poet well known, that of the sculptor unknown, but not less illustrious; each relying on his own inspiration; each pursuing the path of his own distinct orbit of human excellence, parallel to each other; each one entire, varying one from the other; independent of each other, yet never servile one to the other. Such may they ever continue. I should not venture to offer any opinion of the height to which English artists have attained; yet there are some points which mark their proceedings, upon which any man, as a man, may give an opinion. He may judge of the spirit in which they work. I have before me two men I need not name, each of them most distinguished in one of the sister arts which are united together in the Academy; and of whom I believe I may say that, at about the same time, they having received a commission for the execution of a great work from high authority, and each having executed the commission in a manner that must have satisfied the severest taskmaster, independent of himself; yet neither the one nor the other had satisfied the severer taskmaster still that he bore within in his own mind and heart; and each of them has given, or is about immediately to give, the whole of his achieved labour to pitiless destruction, in order to begin again something that may approach more nearly to his ideal perfection. The state of art cannot be other than promising when such a spirit of resolute self-sacrifice and chivalrous devotion distinguishes its professors,—men who have attained the command of unlimited public confidence,—men whose very name is enough, independent of criticism, to give circulation to whatever they produce.

The President drank the health of the Lord Mayor; saying, the prosperity of the City of London, which, in its results, embraces so many useful objects, comprehends also, in due gradation, the encouragement of the fine arts. In connection with these arts it is gratifying to notice the gradual and great improvement which has taken place of late years, and is still taking place, in the external appearance of the City of London, properly so called; showing that an attention to architecture in its more useful forms and applications may combine the cultivation of good taste with public convenience and security; and the Lord Mayor, in replying, expressed the gratification it gave him to see the exhibition and meet those who had contributed to it. Our country, he continued, for the last half century, has been occupied in works of physical science, in great improvements of mechanism, in matters which have tended greatly to the comfort and well-being of the world. It has done enough in that way to suffice for the glory of the country; but, notwithstanding all that, art has made great progress too.

Nearly the last toast was the health of the Chief Commissioner, the Hon. W. Cowper, in proposing which Sir Charles Eastlake said the skilful arrangements which, under unpromising conditions of space, have been planned and completed in the recent alterations of this building, do honour to the architect, Mr. Pennethorne; but we are indebted to the Chief Commissioner of Works for enabling the builders to complete their labours within the appointed time. Afterwards, when Mr. Cowper acknowledged the toast, he paid a graceful compliment to the skill of Mr. Pennethorne.

THE ARCHITECTURE OF LONDON.

WE continue our report of Mr. Hope's address on this subject.* He advocated, and still adhered to the belief, that the greatest improvement in London would be the construction of a river-side park between Westminster Abbey and Charing Cross. Whilst we had the great forest track of Kensington Gardens and Hyde Park—whilst we had the meadow of the Green Park and the ornamental garden of St. James's Park coming within two or three hundred yards of the river, it was a shame and disgrace that this great sweep of country in the middle of the town should not come down to its natural basis—namely, the Thames. There were many other schemes which a fervid imagination might dream of. Sweeping away, not without a sigh, St. James's Palace, opening St. James's Street to the Park, and then carrying it forward until it touched and was lost in the Regent's Park, would be a magnificent improvement. But putting all these considerations aside, the practical question was, how to improve London as it stands. The lecturer then gave an outline of the configuration of the ground on which London stands, which he said was admirably suited by its undulating character to conduce to a picturesque effect in its buildings. There was hardly any town of the size of London that lay in a country of so high an average elevation. Venice and Amsterdam respectively, perhaps, the most picturesque Southern and Northern cities in the world, were each of them situate in morasses won from the sea. To be sure, the presence of water up and down the streets of those towns and the character of the buildings that fringe the quays give to Venice and Amsterdam their peculiar character; but, compared to those cities, London was a series of broken hills, in fact almost a mountainous country. The cause of this vast size of London was nothing to be proud of. London might have had all its population, all its healthfulness, and a great deal more, and much more convenience than it had at present, but for the accidental fact of the building of this city having got from the hands of proprietors into those of middle men, and from their hands into those of double middlemen under them. The system of giving leases, advantageous as it might be in many cases, produced a spirit of speculation, and the various proprietors of farms about London threw them into the market, and endeavoured to realize in their lifetime by parting with them on building leases. The principle was adopted of erecting buildings which covered the maximum of ground area with the minimum of vertical height; and so London had grown up with a combination of different proprietors and different building leases under those proprietors, until it had reached that painful superfluity of area even compared with its population which he hoped would enable us to increase London not into Essex or Hereford north and south, but upwards into the sky, in buildings more aërial, more bright, and more elevated. London being a northern city, of course depended much on atmospheric effects. Those southern suns gave a clear sky, a climate which, except when a thunder storm came on, was of almost unbroken brilliancy, but there were none of those half shades, those mists that came and went, that play and variety of atmosphere which represented the same building under different aspects at different times. Those atmospheric effects were what the northern architect should rely on. He must not rely too much on combining foliage with house building. Foliage did very well in climates where not much coal was burned, where, consequently there was no deleterious atmosphere, and where the warmth of the sun kept evergreens green, or brought out the deciduous trees early in spring. In London the combined effect of coal smoke and a cold climate caused the trees to come out very late, and to turn black very early. Common sense had taught Englishmen that the best way to deal with foliage was to mass it together, to bring as it were large tracts of country inside the town, and mass his foliage with broad belts of turf between them. Our parks illustrated that principle; as did also our principal squares, such as Grosvenor-square, Lincoln's-inn-fields, &c. In a warmer climate the planting of trees in streets might be adopted, and it might be advantageous here also; though, as he had said, it was not to be relied on. In Amsterdam, for instance, there were rows of trees along the streets, which in summer conduced much to the picturesqueness of the city; but even in winter the gables compensated for the absence of the foliage. Any great scheme of reconstruction was not to be thought of: the widening of streets and the making of short cuts whenever that could be effected were what we should rely on. A great deal would be done with broad pathways being, as it were, swept out by a cannon-ball, and the various means to that end, though in themselves they might seem insignificant, would produce a satisfactory result. To come to the point—what were to be the main principles of the future architecture of London? Design was one: material was another. He contended that under the head of design they might come to two main principles, each of considerable importance. The first was to play with the sky line; to take that sky line and deal with it boldly as the most important feature of the whole building. The second was to construct every house as in itself a unit standing by itself, looking, of course, more to its height than to its width. The principle of building houses in terraces, which was the principle that must be adopted in a monumental city, and the principle so often adopted in London, could never be satisfactory. Do what you will, there was something about it that betrayed the sham. In building a town, even if it were necessary to make a street as straight as an arrow, it would be better to break up and destroy the uniformity of the terrace. The idea of causing it to resemble a palace front could never be realised; and if the builder had to make one house higher than others it would be better to place it at the corner instead of in the centre of the mass. The sky line resolved itself into three special forms; namely, the pyramid, the tower, and the cupola. By the pyramid he meant everything that tapered up with two lines meeting at a central point: it included the spire, the cone, and the gable. By the tower he meant everything that rose in a square mass, and thus the tower included the massive chimney-stack. By the cupola he meant everything that rose with lines more or

* See p. 298, *ante*.

less curvilinear, and under that term he included the Mansard roof. These three included everything out of which the sky line ought to be formed; and in building in London, with its varied atmospheric effects, the sky line ought always to be taken into consideration. An architect, if he had the selection, would choose the corner of two places for the erection of his building, on account of the opportunity it gave him for rounding off, which added so much to the general effect. That was a very laudable ambition, because then he would have scope there which he would fail to find elsewhere. Dealing then with houses as units, what were they to come to? The first thing to look to was the elevation of the front, which was all in all. It is often very seductive to draw a very pretty geometrical elevation, but they might take his word for it, that was very often little better than a mockery, a delusion, and a snare, when building in a town. Every building has a front, but it has also two sides and a back, and the elevation of the front, with respect to the two sides and back, would as often lead astray as lead in the right direction. Look to what London is: blocks of houses, enclosing hollow squares within. These blocks could not be called absolutely square, as they were generally longer in front than deep behind. If buildings were erected nearly on the same elevation, he would not say they would see an ugly back, because that would be hidden, but a side that in no way corresponded with the front, and they would also see an ugly cornice stopping 4½ inches round the corner. These cornices, he would say, were the greatest temptations that could come in a frail and erring architect's way. They should avoid cornices as they would avoid any other form of evil. If they could carry it round they should do so; but if they put a great lump of a cornice, hanging in front and ending in nothing, they would make a great sham, and expose themselves to the criticism they richly deserved from those who would look more than 1 inch round the corner. They should deal with the sky-line as he had stated, run the building up into a cupola, tower, or pyramid, and then they would place the cornice in its right position. He did not mean to say that the cornice should not play its part, but its part should be a very subordinate one in this northern architecture which he advocated. It should be the base of the sky-line capping, not the termination of the vertical building. For instance, if they had a cornice as the termination, how could the chimneys be carried out well? and yet a good solid stack of chimneys, in the hands of a good architect, is not only virtually but really a tower. It gave elevation and formed a break. It might be to a great degree grand, and at the same time to as great a degree unsightly. Any stack of chimneys that required crockery or metal topping was not only a failure but a solecism, both architectually and actually. By building the stack in a mass, which was not consistent with the heavy cornices he spoke of, they would secure the sky-line and have domestic comfort for those within, and architectural beauty for the building. He would give them an instance of a great opportunity lost. If they stood at the north-east corner of the Green Park, they would have west the whole stretch of Piccadilly; south, the broken ground of the Green Park, terminating with some of the towers on the Palace of Westminster. The spires of several churches were also to be seen, and a glimpse was also got of Buckingham Palace, to which distance lent a charm which it was said was not to be found nearer. They would see also a large building which he believed was intended for a hotel. It was an offence to the eye, and why? Because the details were mean. If it had a Mansard roof and a few stacks of chimneys well disposed, then at a distance of 200 yards they would mass these, but they are wanting; and where this building might be the turning point of a great town landscape, it was a huge block of deformity. That might be taken as an illustration of what he had endeavoured to impress upon them. He did not know to whom the design of that hotel was owing, and therefore he did not speak from personal feeling, but merely from observation of the edifice. Lower down, Bridgwater House also failed with chimneys. They were just sufficient to attract the eye, but not sufficient to make a rest for the eye which they attracted. The same might be said of Stafford House, though they were both great masses, with good architecture more or less about them; but there was want of sky-line that was more especially needed owing to the slope of the ground in that direction. If they went to Hanover-square, to Hyde Park, anywhere in Grosvenor-square, they would see the spire of that beautiful building, St. George's Church, producing, if it was a hazy day, a fine atmospheric effect. The site of the building might have been an accident, but the effect was great. Wren's western end of Westminster, with all its defects, was a great mass. Near it were Mr. Scott's very picturesque houses; and in the same neighbourhood, that monument of which a very high official was able to speak with such a superb superabundance of ignorance the other day. In looking through London, it would be found that street scenery had not been altogether disregarded. There was the Euston Hotel, with its high elevation; there was also the Great Western, which was a great improvement; also the Victoria Hotel, near Buckingham Palace, which, without entering into a discussion of design, from its altitude boldly thrown skyward, from the stone of which it was built, and from its pyramidal roof, was to be admired. Looking at these edifices, nobody would say that the cause of architecture was not growing in London. There is a house lately erected on the west side of Bishopsgate-street,—Mr. Wilkinson, architect,—in which the form of Italian Gothic has been introduced, and the cornices have been dealt with so as not to make the fatal mistake of looking round the corner; the pyramidal roof has been carried out, and those who approached the building, would find a specimen of magnificent architecture,—a good outline and great beauty and delicacy of detail. Mr. Barry's schools at the corner of St. Giles's-street were also works of very high merit: the height is great, and the gable, which is one of the elements of the sky-line, successfully handled. They were aware that gables could only be dealt with very gingerly in London, owing to the restrictions imposed by the Building Act,—one of the objects, no doubt, being to guard against fires. That should be considered by architects, and it, of course, deprived them of full scope. Those buildings by Mr. Barry had a very good altitude, and a very sufficient gable, and, inside, the rooms were airy, light, and well distributed. That was a locality in which buildings of more or less merit would be found. The schools of the parish of St. Martin showed considerable study. The buildings he alluded to were massed together, and the unity contributed to the great whole of London's future picturesqueness. They showed what the town might be if fairly taken in hand by one person after another, each person aiming at some particular object. It was a mistake to think that in Amsterdam and Venice, or any other Continental town, the buildings were all first-rate, or even tenth-rate. They were generally thirty or forty rate. It was the *ensemble* to which they owed their effect, making them appear as if with respect to each it had been its design and intention to carry out one idea,—and not to the mere mechanical piling of them together. I will not take you through the City; but in the City there are many very sumptuous edifices round about our public buildings. There is Mr. Sarle's edifice, and the still more sumptuous Marine Insurance Office; then there is the somewhat fantastic Telegraph Office behind the Royal Exchange, and also the small but pretty schools of St. Mary's, Aldermanbury, erected within a few years by an architect seated in the City. If they proceeded onwards to the poorer neighbourhoods, they would traverse street after street, uniform, and monotonous, and wretched, and their hearts would sink within them; yet here and there they would see a sample of what enlightened enterprise might carry out. In one of the poorest parts of Bethnal Green, Miss Coutts had built three great lodging-houses, two of which are complete and the third almost out of hand. They are solid masses, on a huge scale, constructed of fire-proof material, with some pretensions to architectural elegance in their sky-line, and with a bulk and solidity which carry beauty with them. These are full of inhabitants, and are the representatives and correlatives of many streets and houses, massed into those great structures. How far the habits of the population might allow them to live in "flats" instead of houses was a matter which he could not then enter into, suffice it to say, that here and there the experiment had been tried, and there had been enough success achieved to warrant its imitation, not merely by the architect but by the philanthropist. He had taken them so far through a great deal of London, but had not yet entered on Belgravia, or Tyburnia, nor into that region which had been built in a quarter the name of which he was afraid he could not accurately give. A few years ago he would have called it North Brompton, now he believed he should designate it South Kensington. Whether it was North Brompton or South Kensington, there were large houses and straight streets there. No doubt they were improvements in the buildings compared with what they might have been some years ago. The height is greater in Tyburnia than in Belgravia, and in Brompton-Kensington than in Tyburnia. There is an improvement also in the roofing. Still there are many points which do not admit of so much praise. The material is almost confined to compo. The distribution of streets is that miserable one of right angles, square blocks, mutations of palaces, terraces, in short, where we want houses. There was no harmony in them with ancient London. They were the last specimens of every thing which, if they meant to make the metropolis picturesque, they ought to avoid. There was intended to be in the last of those regions,—South Kensington,—a building, not yet risen above the ground, which, they were told, would be completed by the 1st of May, 1862: he meant the Great Exhibition building. He should have hoped and wished that, in a lecture on the architecture of London, one might have wound up with a glowing panegyric on that very vast expanse of structure. He feared, however, that, with all desire to see the Exhibition successful, with all desire to give all praise to every good intention, he could not be very florid or very enthusiastic in his laudation of that design. People's tongues had been tied, because it was such a very good intention. It would seem like throwing dirt in the face of one's benefactor to criticize it. On the other hand, one did not like to cast reproach on anything that was like an effort of genius, or which might seem to be genius, emanating from quarters which possessed the merit that a generous man always appreciated—that of self-instruction. But still he feared he should express something not very far distant from profound disappointment at the design. It was allowable to be disappointed at a first effort. It was, he hoped, not a crime to be disappointed at the large glass cupolas; and disappointment would not have been changed into approbation had the still larger central cupola continued to form a portion of the design. And there he would leave the Exhibition of 1862. He had been speaking so much of design that he had left himself little time to speak of material. Those who had studied the progress of architecture could not fail to realize how much their resources in the way of material had been developed; how, instead of being confined to mere Bath and Portland stone, or the ordinary brick, they had gone into the polychromatic development of real material. If they went into this style at all, they should do so boldly. The materials should be of the best sort, each in its proper place, and all well and strongly exhibited. They saw too often the polychromatic style of architecture carried out with the yellow brick of London, with a few red bricks thrown in here and there. That would not do. The bands should be bold and broad, and the colours distinct. By some means, fair or foul, they should bully the brick-maker into giving better bricks, such as were used in many of the brick buildings on the Continent. The magnificent hospital of Milan was built of red bricks, with mouldings carried out in the same material—hard red bricks, which stood the wear and tear of centuries. If they could get that material in England, well and good; if not, they should go elsewhere for it. That which they used at present—the yellow, red, and black—fused into a uniform chocolate under the London smoke. They should therefore use other tints, such as green. That colour might be used in painting window-frames, and in other portions of the structure. But whatever colours they used, yellow, red, black, or green, they should be of superior quality, and be more boldly dealt with. Time warned him to draw to a close. They would bear in mind that he had dealt exclusively with secular architecture. He had done so because he believed that the brunt of the battle now rested, so far as town architecture was concerned, with that particular branch. Churches which had both gables and spires took care of themselves. Ecclesiastical architecture had gone on improving, and had contributed more than any one had an idea of to the picturesqueness of London; and he left it as it was, not because he did not realize its real importance in every way, or underrate it, but because it was not the point which required expansion and improvement. The next matter he would observe was, that up to the present he had not insisted upon style. He thought he had hardly in the course of the lecture used the words Renaissance, Gothic, and Classic. He had not adopted that reticence from cowardice, or from a

desire to avoid the subject. He was a Goth—more than that, he was a Northern Goth; but he was anxious to beautify the Northern Gothic with the best points of other styles, namely, the Italian-Gothic and the Italian-Italian; for now that nice distinction should be drawn. He was willing to give a welcome to the best features of Grecian and Italian Gothic, and to extend the highest admiration to buildings of those classical and various styles, either in or out of London. He looked on St. George's, Hanover-square, as one of the best specimens of picturesque architecture. Then there was that magnificent structure which they saw when looking up Ludgate-hill. The forest of City spires to be seen wherever the eye turned, and the grand conception of Hawksmore, who learned his lessons not only in Italy, but on the Rhine. If they looked at St. George's-in-the-East, they would realize the inspiration which he must have drawn from styles very little appreciated by men in those days. He was ready to give credit wherever credit was due; wherever conception and originality got play. He was a Northern Goth, he hoped, in conviction, not in prejudice; because he believed the Gothic best fulfilled certain general rules of taste which ought to be applied in London. If they had gone with him in treating houses as units, not as component parts of terraces; if, as he had appealed to them to do, they would play with the sky line; if they made the cupola, the pyramid, and the tower the main features of that sky line; if they attended to design, and adopted judicious variety of colour in the materials, then he left it to their calm and cold judgment to answer in what style they found the best exemplification of all these principles. He appealed to their calmest and coldest judgment; and the more calm, the more cold, and the more critical that judgment was, the better he would be pleased; for then would they be the more likely to answer,—"The Gothic is the style with which they could best grapple with those problems." If they did not do so, for his part, he would be much surprised. In the mean time he trusted he had not occupied their time unprofitably. His endeavour had been to point out—he feared he had done so imperfectly—how, little by little, they could all of them work, as it were, like ants, so that contributing, by small degrees to the great heap, they might deal with this London of ours,—this vast, sometimes cold, often foggy,—this northern, this great, this inimitable London, and might each, in his own measure, help to convert it into a picturesque city in conformity with the natural variations of its soil and those rules of architecture which they had learned in northern climates. London would be a picturesque city if they set their shoulders to the wheel. Its picturesqueness would not be the picturesqueness of abrupt rocks and deep valleys, such as they would have in Edinburgh; but a picturesqueness in which the vastness of the whole mass of the metropolis much more than compensated for those accidental advantages,—where the thousands and tens of thousands of the houses, its numberless streets, and the number of reconstructions that go on day after day, may, with a very small amount of talent expended on them, produce a great result. There is the very highest architectural talent available in London now. The very highest talent is used here and there, and in a great many cases a secondary amount of talent, and that secondary talent, imitating the higher, will carry on the great work which we all desire to see accomplished. If there was only something like unity of intention and desire to build for the sake of the town itself, and not merely for the individual structure, with a true idea of elevation and aspect, as viewed not from a few yards distant, but from whatever point the perspective could be gained,—if, above all, the builders could be got hold of and made to understand that monotonous rows of tenth-rate houses, run up with starved designs in horrid terraces, were not commodious, beautiful, nor even cheap,—if houses were built for their own sake, as part of a whole, and not for the sake of any fancied uniformity with the house next door,—if they could get into the mind of the builder that London is not a *caput mortuum*, but a great city in the course of rebuilding,—then it might be rebuilt into something most picturesque and beautiful, by the multitudinous aggregation of units one with another. They might lay the foundation of converting this London of ours, which is so often, and so often unjustly, a mockery and laughing-stock, both to people at home and abroad, into a metropolis which might, in a century or two hence, have a name all through the world for infinite variety, infinite beauty, infinite quaintness, and also infinite gracefulness of architecture.

The Chairman (Mr. Scott), called on the meeting to join in a hearty vote of thanks to the lecturer. The subject which had been dealt with in so interesting a manner was one of great importance, and should not be passed over without some remark, however short. What could be so important as the advancement of architectural art? What could so supply an object to exercise it as improving and raising from its low state of architecture the greatest city that the world ever saw. London, he was glad to say, was showing signs of rising from its low estate, and helping in the great work. Such lectures as they had just heard would have a very great effect. Each of them in his own special sphere was called upon from time to time to think on these special subjects. It was not often they were called on to direct their attention to the whole of the subject, and to the aggregate of the subject, but it was highly desirable that their attention should be directed to the greatness of the task before them, and that they should all do the best they could to carry out those great principles by attending to the breaking of the sky line as well as the material which they made use of. For the last fifty years a series of Building Acts had restricted the architect very much; but notwithstanding these resolutions, there was great scope for the exercise of genius. Let them try to get at the minds of the builders, who, as a general rule, when they designed rows of houses, probably did so by calling to their aid young architects not yet in practice. It should be impressed upon those young architects that they ought to influence their employers to throw a little more of the picturesque into their structures. With respect to materials, it behoved every architect to attend to the colouring, so that their work would not be reduced to a dull monotony. All their efforts would be in vain so long as they did not secure proper materials. The only way to obviate the existing evil was to obtain vitrified brick without a glazed surface. Hitherto bricks of this description had only been produced at a very great cost: he saw no reason why it should be so, and he believed that if proper attention were directed to the subject, good and permanent vitrified bricks of the kind he referred to could be produced at a reasonable price. If by the use of such material they could get rid of the present dull monotony of colouring they would have a chance of making London beautiful and light, as she was already vast and grand. The chairman concluded by again calling on the meeting to thank Mr. Beresford Hope for his admirable lecture.

GENERAL MEETING OF THE ROYAL INSTITUTE OF BRITISH ARCHITECTS.

THE annual general meeting of the Institute was held on Monday evening, the 6th of May, to receive the report of the council on the state of the property and affairs of the Institute, together with a balance-sheet of the receipts and disbursements; and to elect officers of the Institute, and examiners under the Metropolitan Building Act, for the ensuing year. Professor Donaldson, V.P., presided. The meeting was very numerously attended.

The report read was of a very satisfactory character, and the balance-sheet showed that the finances were in a very flourishing condition. Of these, hereafter.

The chairman having proposed the adoption of the report,

Mr. Tite, M.P., seconded the motion, and in the course of his observations commented on the interference of the civil and military engineer in domain really belonging to the architect.

Mr. Beresford Hope, in supporting the proposition (which was afterwards carried unanimously), expressed his fear that architecture was not provided with a special place in the proposed Exhibition of 1862. He condemned the building which it was proposed to erect for it, and said it was to be hoped the works exhibited would show that architects were necessary to architecture.

Thanks to Mr. Cockerell, R.A., president, moved by Mr. Scott, R.A., and seconded by Mr. Ashpitel; to the vice-presidents and council, moved by Mr. Charles Barry and seconded by Mr. Scott; to the honorary secretaries, Mr. Hayter Lewis and Mr. James Bell, moved by Mr. Godwin and seconded by Mr. Tite; and to the honorary solicitor and auditors, moved by Mr. Mair and seconded by Mr. Ferrey, were passed with unanimity and warmth.

The Chairman, after some observations pointing out the extreme fitness of Mr. Tite for the office of President, invited that gentleman to say if he would serve if elected.

Mr. Tite replied that if appointed by the general wish of the meeting, he would act willingly, and do all in his power to further the interests of the profession. He expressed his belief that the profession suffered in 1851 through the President not being a professional man.

It was thereupon proposed by Mr. Godwin, and seconded by Mr. G. Mair, that Mr. Tite, M.P. and F.R.S., be elected President for the year ensuing.

It was then proposed by Mr. Street, and seconded, on the ground that it was not desirable to continue electing an architect as President, that Mr. A. J. Beresford Hope be the President for the year.

Mr. Hope expressed his willingness to serve if elected.

After much discussion, the election of President was adjourned for a week by a very small majority.

The following officers were elected: — Vice-Presidents — Messrs. T. L. Donaldson, M. D. Wyatt, and G. G. Scott; Honorary Secretaries—Messrs. T. Hayter Lewis and James Bell; Honorary Secretary for Foreign Correspondence—Mr. F. C. Penrose; Ordinary Members of Council—Messrs. B. Ferrey, W. Haywood, C. C. Nelson, J. Norton, E. M. Barry, J. Fergusson, R. Kerr, W. Slater, G. E. Street, and J. B. Waring; Treasurer, Sir W. R. Farquhar, bart.; Honorary Solicitor, Mr. W. L. Donaldson; auditors, Messrs. Horace Jones and Arthur Cates.

THE CONTEST FOR THE PRESIDENCY OF THE INSTITUTE.

SIR,—Few, I think, who were at the meeting on Monday evening will fail to have been struck with the extreme undesirableness of a conflict such as that with which we are threatened. However strong may be our individual preferences for one or another of the candidates, and however much we might individually rejoice to see one or another of them in the president's chair, the painful fact remains that the contest, by which alone either of those now proposed can attain it, is highly prejudicial to the true interests of the Institute. If, however, such a contest be inevitable, the ill effects which I foresee may, perhaps, be in some degree mitigated by doing what may be to divest it of a personal or a party character. Let us, then, inquire for a moment whether the candidates have not each of them claims wholly irrespective of party views.

First, then, as to Mr. Tite. He stands in the foremost rank in our profession; he is retired from its active pursuit, and is a man of independent fortune; he is a man of great and extensive information, not only on matters bearing upon our art, but upon general subjects; he is well known to the public and to public men, a man of unflinching courage and determination; and, lastly, he happens to be the only architect in Parliament, and possesses a singular aptitude for public business, which may be of importance during the year of the Great Exhibition.

Secondly, as to Mr. Beresford Hope. He is the son of the celebrated Thomas Hope, and inherits his devotion to the study of architecture, of which he is one of the most munificent patrons; though non-professional and a man of fortune, he devotes a large proportion of his time to the promotion of objects connected with architecture, and has continued to do so for a long course of years. Though not at the present moment in Parliament, he has been, and, no doubt, will be so again; and his social position brings him in constant contact with those in power. He is the originator of a most important movement, the object of which is to ensure the representation of our art in the approaching Exhibition on a scale and in a manner worthy of its rank among the fine arts;* and to this object he is devoting his time and his influence; he is a man of great urbanity of manner and of tact in the conduct of public business; and finally, is the author of an architectural work of considerable merit, and in every way a most accomplished man.

The two principal candidates, then, having these recommendations, let those who support them do so rather on these grounds than because one is supposed to be hostile and the other favourable to the revival of Gothic architecture. If, however, the claims of neither can be advocated without party or personal strife—so injurious to a society like ours—let both withdraw for the sake of peace and unanimity, and let us have for our president

* Simply on the ground of correctness, it must be mentioned that the movement was originated by the Council of the Institute of British Architects at the end of last year, and was referred to in our volume for 1860, p. 784.

a man who, though not possessing *every one* of the claims enumerated above, can boast of *many* of them, and who adds to them the somewhat important recommendation of being *the founder of the Institute*, of having devoted to its interests twenty years of most devoted labour, and of not being in any strong degree a representative of either of the parties into which our individual tastes divide us. F. R. I. B. A.

Athenæum.

*** It was, at first, our intention to have omitted mention, in the notice we have given of the meeting, of the gentlemen named for the office of president, as being the more agreeable course for both; but the position of the writer of the above claimed from us the insertion of it, and led us to take another course.* We must set him right, however, in one respect. Mr. Tite was not "a candidate," although he may be so now. When that gentleman was requested by the late Council to allow himself to be nominated for the president's chair, he refused distinctly to become a candidate, and consented to serve on one condition alone, namely, that he was elected by the meeting *nem. con.* This he repeated emphatically on Monday evening; and those gentlemen who have thought it desirable to interpose a candidate in opposition to the unanimous invitation on the part of the Council, may, therefore, deprive the Institute of the advantages that might result from the services of Mr. Tite in the capacity of president. Under the altered circumstances, however, he will doubtless yield his objection, and allow his friends to elect him. Our own opinion as to the desirability of having a professional rather than a non-professional president has been often expressed, so that Mr. Hope is not likely to misinterpret our remarks: and we believe this desirability to be greatly increased by the circumstances of the coming year, it being of the utmost importance that the profession should be fully represented in the Councils of the approaching International Exhibition.

WHAT ABOUT THE LABOUR QUESTION?

[*From the French of M. Chevalier, Member of the Institute.*]

A GREAT aid in this study will be to look back on the progress already by the people, and to note how our field and town labourers have reached the point where they now are, a condition which, if not all it should be, is still vastly better than it was in ancient times.

The study seems cold and abstract compared with much that is occurring around us, but it offers us the only means of substituting for the passions which obscure truth the reason which brings her forward in the light.

In the dawn of civilization, the men employed by the head of a family to assist him in his labours were slaves, possessing nothing, not even their own persons, and who passed their lives in a destitution of which the poor of our time can form no conception. The great majority of men were necessarily under the curse of the hardest labour, and could have had no enjoyment of life. Their toil was unprofitable as severe, because it was lightened by none of the inventions which fertilize modern industry. They had none of the highly-finished tools, implements, machines, and the various other appliances which mark steps in improvement, and give effect to others. The natural forces, as wind, water, the elasticity of steam had not yet been subjugated to our use. The lower animals gave us as yet but feeble assistance, for no one knew how to turn them to account. Thus the horse's industrial uses were confined to carrying burdens. Roads, again, were so bad that wheeled vehicles could scarcely be forced up their ascents, and were subject to sink so deep in the mire, that no prayers the waggoner was accustomed to offer Hercules could disengage them. There were no money advances: industry was distributed to excess, without anything, however, of what we call division of labour; and hence another cause why production was both costly and difficult. The labourer himself wanted aptitude for his work: labour produced little for the slave, because it produced little for the master. The labourer, therefore, lived in abject wretchedness: he suffered the triple misery of body, mind, and heart. He was a chattel by the body, a brute by the soul.

Now, what does all this imply? That in old times masters were tyrants, who for their pleasures, or other selfish ends, trampled under-foot every right of humanity! Possibly: though this cannot be true of more than a few of them. What is certain on the other side is, that society was then without capital, and that here lay the true cause of the evil. Now, tools, machines, every species of apparatus which enable men to apply new improvements, is—*capital*. The powers of nature subdued to our use, her forces laid hold of in machines, and subjected to the will of man, the wind on the sails of the mill, the fall of the water on the wheel, the vapour in the cylinder of the steam-engine, is—*capital*. The immense preparations required for extensive manufactures, *creating wealth on an economic principle*, is again—*capital*. The skill of the workman himself, whether it be the result of preliminary teaching, of apprenticeship, or much experience, inasmuch as it increases production is in like manner capital. Thus the creation and diffusion of capital is the first condition of popular progress. When capital has no existence the greatest number must be in a state of abject misery. In the absence of capital all that the labourer can procure for himself by the most exhausting work is a coarse and wretched subsistence. If there be luxury—and even in ancient societies there existed at times an excessive luxury—it must be so exceptional that if equally distributed among the whole people it would make no perceptible change in their condition. In a word, were there no capital to support a tolerably numerous population on a given territory, a large number of men would, under one name or another, have to live in slavery; that is to say, in extreme wretchedness, and in the most absolute dependence. Without capital the degradation of a part of the human race is so inevitable and seems so necessary, that the most elevated and subtle thinkers, philosophers of whom our civilization is justly proud, held that there were two natures among men—a "free nature" and a "slave nature." We owe the distinction to Aristotle, certainly one of the most powerful geniuses that have appeared on this earth. It is only when capital has accumulated that men's labour produces enough to secure a comfortable existence to a large number, and to withdraw everybody from the hideous misery in which they formerly grovelled, and whose degrading influence pressed equally upon thought and feeling.

This fundamental doctrine, that it is by capital that the great mass rise out of their brute condition, was foreseen and expressed in an original manner by the philosopher to whom I have just referred. "If the shuttle and chisel could move of themselves," says Aristotle, "there would be no need of slavery." Well, when men acquired capital "the shuttle and chisel" *did* move of themselves, and a great progress was accomplished: slavery could be dispensed with. Just as human societies shall have, proportionately to the population, a large mass of capital, will the privations—material, intellectual, and moral—of the majority become less; nay, they must become less, for the force which urges on the great mass, and which tends to take their share in every discovery and acquisition, is invincible. I do not know how anybody can now have a doubt of it. It is thus that the accumulation of capital is the condition absolute to popular progress. Certainly it is not the only one. Science must follow in the wake in order that the increase of capital may find an increasingly profitable employment; and the Christian sentiment which makes us look upon every man as our brother before God, and our equal before the law, must fructify, and emerging from those caverns of the soul where it has been lying hid as in a conservatory, show itself in the practical existence of the nations.

But civilization, if it have divers aspects, is one. There is a law of harmony which presides over it by virtue of which it is not possible that civilization can advance on one side of the life of a people without advancing majestically and altogether in every other direction. In a word, there is no state in Europe where it is possible that capital can increase without the human mind correspondingly enriching itself, and the great mass of the people sharing in the spread of knowledge; for every nation must rot in obstruction, or retrograde into powerlessness, where the sentiment of civil equality and fraternity has not free play.

It is thus that every system which is founded on a pretended natural hostility between the interests of labour and those of capital, must fall like a house of cards. That there have been, and that there are still, grasping capitalists,—that the rich have availed themselves of the opportunities which have arisen to press upon the poor,—are things I do not deny; but it will not be denied here either that the poor have often turned the tables, and had their revenges. But these excesses, from whatever side they come, scenes of rapacity and violence, by which one or the other evidence their evil passions, in no way weaken the conclusion to which an examination of the fact has led us, namely, that capital is the helpmate of labour; that it is by cultivating and augmenting capital that rags and destitution will disappear from our cities; that we shall extinguish the vices which are the inseparable companion of misery, just as capital, according to the prophecy of the Stagyrite, has struck off the chains of the slave. Thus it is the saving of the capital possessed by society and its increase which ought to form the desire of all true friends of the working classes,—of those who wish, with all their hearts, that the virtual equality inscribed at the head of our laws, may merge as soon as possible into that practical equality which subsists in the United States, where nothing in dress, food, general manner of life, I would gladly add, even language, discloses any very great demarcation between the counterparts of our peasants or town labourers, and the most polished denizens of the cities.

Homer shows us that in the house of Penelope, who was simplicity personified, there were twelve women occupied day and night in grinding the corn necessary to the subsistence of the Queen of Ithaca, and of her companions and guests. We should exceed the truth if we named three hundred as the probable number thus fed by Penelope. Now, in this antique community, where there was no capital, and where everything was done by the sweat of the brow, it is clear that one person was required to grind, and to grind ill, the grain consumed by twenty-five,—perhaps by less than half the number. Now, supposing that all the corn used was in this way ground, one person would have been constantly required to be grinding for every twenty-five, or rather for every ten or twelve of the population. What an enormous proportion! We see by this example, among a thousand others, to what a point the human race must have been crushed under the exhausting toils necessary for supplying the first necessities of life, and how truly we may say that the most that men could then extract from the most oppressive labours was a wretched subsistence. In our time we have attained such a perfection in applying capital to the purpose of corn-grinding, that a large mill like that of St. Maur, near Paris, can grind daily enough flour, by the aid of twenty hands, to ration a hundred thousand soldiers,—that is, one miller for every five thousand consumers. Since, in ancient times, it required so much labour for so small a result, Penelope had no choice but to maltreat the twelve slaves occupied in grinding her corn, to give them but a small pittance, to clothe them indifferently; and it was, no doubt, much the same in reference to all other occupations. But supposing all our industry organized on the same basis as the mill of St. Maur, we should find it possible, nay easy to recompense every workman on a scale of actual magnificence. But 3,000 years ago there was no capital of any kind with a vast number of workmen, and therefore little production. But in a state of society where every kind of industry should attain the perfection of the mill we have just named, with capital sufficient to employ the whole population, the amount of production would be immense compared with the number of workmen: the capitalist would be secured a handsome return, and the workman inevitably obtain very high wages.

The improvement, then, of the condition of our working population reduces itself, in the eyes of one who knows how to analyse facts, to this simple formula—augment capital; develope every form of capital, including especially that which consists in the skill, industry, and assiduity of the workman; provide in such a way that, in relation to the population, capital, under all its forms, may be as considerable as it is possible to make it. It is under this formula that we must present the essential conditions of all amelioration, moral and intellectual, as well as material, of the majority of society; for, let me repeat it, the rule applies equally to all. Outside and beyond it, the people will meet nothing but illusions and deceptions, and society has nothing to expect but peril, agitation, poverty, and catastrophes.

The first thought of many who have superficially examined this great question is, that our distribution of the products of labour is bad; that it is all-important to change it; and that, in this simple manner, we should put an end to the distresses of the working classes. Hence the vigorous measures we see at times taken for an increase of wages, and a diminution of the hours of labour.

* Several letters of simple advocacy on either side we are compelled to omit.

Let us examine the two points, then, and see how they look when exposed to the light of truth.

Every increase of wages which is not accompanied by an increase of capital proportioned to the population, must be ephemeral. The laws of regulation by which we hope to introduce or maintain such an increase cannot stand. Terror may enforce them for a few days, but only for a few days, for the excellent reason that the thing aimed at is as impossible as to build a house which shall be self-sustaining in mid-air; or (to use a comparison which shows more definitely the nature of the chimera which people are thus pursuing) as to withdraw from any given object parts which, united again, would make more than the whole. You fancy you can attain your object by largely diminishing the hours of labour: well: masters will come to pay at so much the hour. You would fix peremptorily your rate of wages per hour: your behests will be eluded, because they cannot be obeyed. Labour is a branch of merchandise whose value is regulated like that of any other article in the market. It is just as impossible to fix by any arbitrary will of authority the market value of labour as that of bread, meat, or iron. It would be a happy circumstance for our national industry if iron could be sold at a farthing a pound. Unfortunately, it cannot be made for that price. Suppose, however, that the Government should decree to-morrow that its price should be fixed, under penalties, at a farthing a pound. Do you think it could be obeyed? This or that ironmaster, under a temporary alarm, might obey, but it is obvious that the rest would instantly close their works. Now, just such would be the result, sooner or later, more or less directly, of all such violent attempts to establish by law a fixed price for labour.

The recent demand for increased wages, with shorter hours, has also this enormous drawback just now, that rarely have we been at a moment when there were less means of bettering the recompenses of labour. Confidence has disappeared to give place to panic. Now, it is confidence which upholds capital, which enables it to produce and to distribute all that society stands in need of,—which, in one word, circulates and fructifies capital. It thus happens with the same wealth in land, houses, machines, roads, canals, and railroads; with the same stock of raw materials, and in manufactured articles; with the same intellectual capital in talent, knowledge, and ability, we are all of us poorer than we were a short time since. The fact is, that there are so many out of the general depreciation to extract higher conditions of existence for fifteen or twenty millions of our fellow citizens. Manufacturers, agriculturists, merchants, lawyers, doctors, artists, men of letters, all gain infinitely less than they did a month ago. Is this the moment, then, for workmen to demand higher wages? In such a crisis there is a higher question than high wages for labour—the having labour at all.

What is the law which regulates wages wherever labour is free? The supply of capital in comparison with the number of men requiring employment. We have here the eternal law, in reference to supply and demand, which governs all our business operations. A manufacturer has capital to pay a hundred workmen at the rate of 4s. a-day each. Two hundred offer themselves: if obliged to employ all, he can give them but 2s. a-day. In this way, the more the population increases relatively to capital, the more wages must fall. They must fall, though it be to the injury of public health, and in spite of all the appeals of Christian charity and of wounded humanity. They will fall, until the unfortunate workpeople are reduced to the minimum of starvation, to the coarsest kinds of food. This was for a long time the history of Ireland, where as the people multiplied while capital remained stationary, the unfortunate peasants came down from the use of meat to dry bread, from dry bread to a good kind of potatoes, from a good kind of potatoes to the worse quality produced in greater abundance from a given surface. This is frightful. True; but it is an inexorable necessity. "Where there is nothing the king loses his rights," says the old maxim. It is just the same of the people, whether it be sovereign or not.

Tribunes, philanthropists, preachers, it is useless cudgelling your brains; you will find no other solution than this;—frightful misery wherever there is an immense abundance of hands with little capital. Laws guarantee labour! laws guarantee wages! Childish effort! Your guarantee will be idle so long as you shall not have created capital; and you have no mode of creating capital except by accumulating labour, by economy, by moderation, and by patience. To desire increased wages or shortened hours of labour, so long as there is no increase of capital, is either chimerical or it is ephemeral. Let us take this manufacturer who has been employing two hundred workmen. You wish him to double their wages. Should he consent, the most that he can do is to employ for a time a less number of hands. What will you do with those he discards? You may answer,—"The State shall give them work. It shall open national workshops." Good. But these workshops will require capital. Whence will you draw it? We cannot do for capital as Pompay said he could for soldiers: stamp the soil with his foot. To obtain the capital necessary for these workshops the State must either take it or borrow it from private industry; but, in this case, private industry, having so much less capital, will be obliged to send away so many more workmen. While you are employing them on one side, a proportionate number will be displaced on another, who will also come to you for employment, and there will be no end of it. It is the wheel which Ixion is for ever turning.

Then, if wages are increased, the cost of production is raised: products must be sold dearer under penalty of loss; and thus consumption will be diminished. Production, as a matter of course, will diminish also; and hence fewer workmen will be employed. And how will you remedy it? Not by national workshops, working in good faith on a borrowed capital; as I have shown, that is impossible. There is, it is true, one expedient: take from the Consolidated Fund all that is necessary to support unemployed workmen. What is this but the poor-rate under another name? This tax will be drawn from the same source as the others: it will be so much taken from the national capital, for these ten millions—let us say ten—if left to the tax-payers, would have served in a great measure to augment the national capital; and from the moment you distribute them among unemployed workmen, they become consumed, and may be said to have no further existence. You are, then, battling against the very object you have in view, if you desire to better the lot of your working population. Your business is to increase capital: your plan is to diminish it.

There are several branches of industry which export their productions. France exports more than four millions sterling in woollen tissues, a like value in cotton fabrics, together with considerable amounts in silks and "*articles de Paris*."* Now, as a fierce foreign competition meets us in every market, the preference our productions receives is based on some trifling difference of price—say two, or three, or four per cent.—in our favour. Now, if wages are raised any other way than by the natural course of things and the free action of trade, we have the cost of our manufactures increased, and we lose our superiority in the foreign market: our export trade is ruined: the immense populations of Paris, Lyons, Malhouse, and twenty other cities which manufacture for exportation, are left without employment. You fancy you have advanced a step: you have gone back ten.

Is it possible to change the distribution of the fruits of labour, which has hitherto existed by giving a larger share to labour, and a less one to capital? Many answer this question in the affirmative. Are they right?

Most certainly not. This is one of the delusive hopes in which thousands of workmen rock themselves, greatly to their own injury. In all free societies (and I suppose that people are anxious that modern society should preserve a characteristic so painfully acquired), under a system of perfect freedom of labour—of that freedom for which workmen have sighed through so many ages—the part played by capital is determined by that unchanging law of supply and demand I have already referred to. When there is little comparatively to workmen, the profits of capital are large. When capital abounds, its share of the fruits of labour becomes less. History proves that what we call the interest of capital gradually diminishes in proportion as civilization results in greater wealth. And thus we fall back upon a conclusion at which we arrived by another road: if you wish capital to have a smaller share from production, increase the proportion of capital to labour. There is no other way.

Let us go a step further, and measure what we might expect not only from a reduction but from a total suppression of the share that now comes to capital. We perhaps exaggerate the total production of France in material products in putting it down at a billion of francs. Let us suppose to-morrow that by some revolutionary decree the Communist system be established in France, that all capital be confiscated to the benefit of the state, and that each of our thirty-five million Frenchmen had to take his fair share out of the billion. This would amount to about 7½d. per day for each head. Well: suppose every unmarried workman of Paris with his 7½d. *per diem*. I know of very few who would be content with such a payment, even though given in the name of a social republic. A family composed of six persons would receive 3s. 10½d.—a modest amount in the belief of many of our workmen. But it will be said, production will extend her wings forthwith, and from this billion will soon spring up two or three. It is a thousand times more likely, however, that under the influence of the fear, confusion, disorder, and general brigandage arising from so immense a spoliation we should sink down to a half, and that the immense upset would establish very soon an equality, not of well-being, but of wretchedness.*

* "*Articles de Paris*" consist chiefly of small articles of taste and luxury made at Paris.

THE GOVERNMENT COMMITTEE OF INQUIRY AS TO STONE.

A MEETING of the committee was held in Richmond-terrace on Saturday last; present: Mr. Tite, M.P. (in the chair), Sir R. Murchison, Professor Hofman, Mr. Smirke, Mr. Scott, Mr. Tennant, Mr. Abel, Professor Ansted, Mr. Godwin, Mr. Burnell, Mr. C. H. Smith, Professor Frankland, and Mr. E. M. Barry. Mr. Bonham Carter acted as secretary. Mr. Quarm, late clerk of the works at the Houses of Parliament, was examined.

At previous meetings various gentlemen whose preservative processes have been tried, were examined at some length, also Mr. Thomas Grissell and Mr. C. H. Smith.

The chemical members of the committee are instituting various experiments; and the committee have advertised, it will be seen, expressing their willingness to receive and consider any processes for the preservation of stone that may be submitted to them by a certain fixed date.

ARCHITECTURE AND THE GREAT EXHIBITION OF 1862.

THE Commissioners have placed Architecture at the head of their Fine Arts section, and we have no doubt will be willing to afford the fullest opportunity for a complete exposition of it. The Commissioners having named the Royal Institute of British Architects as one of the art institutions of this country, through which to communicate with artists, a "Representative Architectural Committee" has been formed, consisting of the Council of the Institute, and deputies from the Architectural Museum, the Architectural Association, the Architectural Exhibition, the Ecclesiological Society, and the Architectural Photographic Society. The Representative Committee met for the first time on Tuesday last, present Professor Donaldson (in the chair), Mr. Beresford Hope, Mr. Roger Smith, Mr. Ferrey, Mr. J. Clarke, Mr. Fergusson, Mr. Lightley, Mr. Horton, Mr. Godwin, Mr. Mair, Mr. Edmeston, Mr. Ashpitel, and Mr. T. H. Lewis (honorary secretary).

Various resolutions were passed, of which it would be premature to speak now, and arrangements were made to meet weekly.

It would seem to be desirable that provincial architectural associations willing to assist in rendering the Exhibition a complete exposition of modern architecture should at once communicate with the Representative Committee.

ILLUSTRATIONS OF LONDON.

IN the British Museum collection, amongst the valuable things there to be found is a large number of prints, maps, and drawings, which were gathered together, chiefly by the care of King George III. A catalogue of these forms a very thick folio volume. Here may be found charts, maps, and views of places abroad; but the chief value of the collection is in the illustrations of British topography, which enable us in a curious manner to compare the conditions of towns, in days gone by, with the present. The views and plans of the metropolis and the suburbs have particular interest, and consist of all the known plans and views of London from before the reign of Queen Elizabeth: by these we are enabled to trace very clearly the growth of the metropolis. There are also views of various dates of the old buildings many of which are not now in existence. By referring to those prints and drawings, a good

* To be continued.

idea of the appearance of London before the Great Fire may be gathered. We also find records of this devastation, and illustrations of the rebuilding of the City.

In the catalogue, under the title "London," there are several subdivisions; such as streets, parks, public buildings, general views, bridges, &c.: each of these can be had in large volumes, of different thicknesses, by writing on one of the reading-room tickets, "King's Coll., London, streets," or any other set of prints which may be wanted. From the street views much information may be gathered of circumstances which happened long before illustrated papers were thought of. We find representations of royal processions, riots in troubled times, fires, and other events. These prints, in addition to other things, enable us to trace the peculiarities of costumes, &c. &c.

In the parks we see encampments and reviews of volunteers, in the days of cocked-hats and pig-tails. Here may be seen George III., in the costume in which he is represented in Cockspur-street; and the fat Prince of Wales, in back view, attired in a tall bear-skin hat and close-fitting dress, like the skeleton suits of the school-boys of the last generation. Here are views of fire-works, rejoicing for peace to be soon broken. We note a mock naval battle on the Serpentine; the burning of St. James's Chinese bridge and temple; the wonderful ascent of balloons; crowds of ladies looking on, in short-waisted dresses and large bonnets. We are, however, taken farther back, to the time when the *Spectator* and *Tatler* wrote in vain against the monstrous head-dresses and hoops; and when footmen, in flaunting liveries, bore before their mistresses clubs nearly as tall as themselves, carved into the grotesque form of those which may still be seen preserved in the umbrella shops of Oxford-street and the City. In the streets we see the changes of the shops and other alterations. Here are the three Royal Exchanges, the Bank of England, past and present, the old and present Mansion House, the Bow-street runners, or "Robin red-breasts," as they were called, in consequence of their scarlet waistcoats: thick cudgels are in their hands. The newsman with his trumpet is loudly proclaiming his papers; sedan chairs help to block up the footpaths; and stage waggons, fast coaches, and lumbering hackney carriages are principal features.

A careful observer will find much to amuse him in examining these prints. We may note the first omnibus and other introductions. Elsewhere we have processions and executions at Tyburn, old conduits, coronations, state trials in Westminster Hall, civic ceremonials, and many other matters which, better than words, show the manners of the generations which have passed away.

In the Print-room of the British Museum, also, there is a very large and valuable collection of prints, drawings, and other illustrations of old London, arranged with the text of Pennant. Here are many matters which are unique. The portraits of eminent individuals have much value; and in other ways the inquirer into the past condition of the metropolis may here gain much information. An excellent catalogue has been prepared by Mr. Carpenter, the keeper of the prints, assisted, we believe, by his son.

In the Guildhall library there are more matters for note in connection with the progress of this vast metropolis. Drawings of the most elaborate and costly description have been added, and illustrated records of sanitary and other progress. There are also records and other manuscripts which have not yet been very much examined, but which will throw light on general and personal history. The Guildhall library is easy of access. An introduction from a member of common council or corporate authority, or well known person in the City, is sufficient. We are glad to see that this library is coming into greater use than formerly, and that a system of lending books to the families of members of the corporation at home has been adopted with good effect.

A "Bird's-eye View of London" was published not long ago with the *Illustrated London News*: compare it with one of the metropolis which was engraved and published in Queen Elizabeth's day. The ancient view is engraved on copper-plate, and the modern one on box-wood. The contrast in all respects is striking. Quaint and curious as are the approaches to old London-bridge, the church of St. Saviour, the monastic buildings of Bermondsey, the inns and gabled houses on the bridge and along the north shore of the Thames, the dwellings of the nobility, the lofty spire of St. Paul's, the walls and gates, the fields and orchards, extending beyond old London town; the modern view is no less striking. With great skill, accuracy, and attention to very minute detail, a picture of the metropolis has been produced which shows in a most remarkable manner the vast extent of the metropolis of our day. This work, which, we are told, occupied the draughtsmen and the engraver, Mr. Loudon, several years, has evidently, in the first instance, been plotted from the existing ground-plans, the various localities being carefully studied; photography has also been extensively called into use, and views from many lofty positions have been taken for the purpose of completing this picture.

In looking at the monster city with the help of this view, the mind is impressed with the vast interests which are here struggling. Crossing the Borough, the great thoroughfares lead to the bridges, which in six parts cross the Thames: it may be noted that these for the most part run in a twisted and inconvenient manner, and contrast seriously with the symmetrical lines of railway which at several points from all parts of the kingdom approach this great centre of population. In the foreground are the Lambeth Potteries, Bethlehem Hospital, the Archbishop of Canterbury's Palace, and the open space of Newington. Farther away towards the river, from the far east to Westminster, there is a dense mass of houses, which forms a dark shadow in the view. Here there are few churches or public buildings of importance. The Houses of Parliament, Westminster Abbey, St. Paul's, the churches of the City are north of the Thames, and far as the view extends, there are hospitals, prisons, theatres, squares, markets, masses of houses and long lines of streets, extending to points which form the horizon of the picture. On one part of the distant line is Canonbury Tower, on another the Angel at Islington. Westward are the new Metropolitan Cattle-market, St. Luke's Church, Holloway, Highgate, and Hampstead, the Regent's-park and Primrose-hill.

It is bewildering to gaze at this view of the homes of 3,000,000 of people, and think of the great necessity which exists for wise and rightly-directed management, and for care of the many thousands who in this great capital are in a hopeless condition. In glancing at the picture which looks so fair to the general sight, we cannot shut out the recollection of localities which are blots on the site of so much prosperity.

THE VENTILATION OF CUPBOARDS.

IN the sanitary arrangement of houses even for the richer classes, the ventilation of cupboards is neglected. In places let out in tenements, closets are the receptacles for bread and fragments of various other kinds of food. Often the dirty cloths are put away in those places waiting for the washing. It is therefore most important that air should be plentifully passed through such corners: generally, however, there is but little arrangement made for this purpose. The doors are kept close, without any perforations. There are no ventilators in the walls, and in consequence those places become cases of polluted air, which, when the doors are opened, escapes over the apartments. This defect is visible in nearly all houses of old date, and while looking at some dwellings of recent construction, it is seen that although care has been generally taken to ventilate stair-cases and rooms, the cupboards are in this respect neglected. Notwithstanding, in houses which are intended for letting in tenements, this is a matter of considerable importance.

SOCIETY OF PAINTERS IN WATER COLOURS.

THE Exhibition in Pall Mall East, briefly referred to last week, consists of 295 pictures, of which more than half are already sold. About fifty-five were sold in the room on the private view day (as against seventy, by the way, sold last year on that occasion), but the sales have been going on steadily ever since. Such of our readers as desire really to see the pictures should go in the morning; for such is the throng in the afternoon just now that movement is scarcely possible, much less examination. The Gallery is quite insufficient, and should be enlarged, or moved to an ampler site. The profits must surely be large. The pictures are of average excellence. Hunt gives his marvellous representations of fruit, and in this case dead birds (258): Richardson shows his cleanly swept up and brilliant river views; Palmer, his brilliant sky effects; Harding and Gastineau, their academic compositions, so to speak, possessing qualities which the mere nature delineator must strive for in addition; Topham, some of his Irish groups illustrating "The Angel's Whisper" (but in this case, to our minds, only Topham—an water); and Branwhite, who is never so good when he thaws, his pieces of winter,—169 especially. If we were called on to select half a dozen pictures for our gratification, we should probably take, giving them in the order of the numbers, and not of preference,—78, "Beyond," by Margaret Gillies (overlooking the mistake this lady makes in using so often the same model); 129, "The High Altar in the Church of St. Augustine, Antwerp," by S. Read (a charming specimen of its class); 201, "Piccola Marina, the Island of Capri," by Paul J. Naftel; 225, "A Cottage," by Birket Foster (a marvel of minute delineation, with general breadth), 275, "The Old Ironside," by F. W. Burton; and 284, "A Rehearsal, Cairo," by Carl Haag. 83, "The Ancient Vestibule to the southern Entrance beneath the Temple Area, Jerusalem," by the same artist, is also a covetable work. His larger picture, "The Acropolis of Athens" (105) in a glow of sunset satisfies us less. There is great solemnity in 98, hard by the latter, by A. P. Newton,—

> "——— The lessening cloud,
> The kindling azure, and the mountain's brow,
> Illumed with fluid gold."

The mist rising, on the left, gives at first an aspect of incompleteness. It was a brave thing to do. His view of "The Garden of the Prince of Monaco, Mentone" (201), has the quality of truthfulness, and the interest given by recent political events. E. Duncan has left the sea, and sends some delicious bits of rural scenery.

S. P. Jackson exhibits seven or eight vigorous and truthful water pieces in his stead: 70, "St. Ives Pier and Bay," is a particularly good example of his art. The landscapes of W. C. Smith, C. Davidson, George Dodgson, and George Fripp, and O. Oakley's "Student" (a lady painter, brush in hand, before the Clytie), all call for a word; but we have only space to say that J. J. Jenkins has several graceful works, of which 130, "Watteau" (painting from a group), is the most important. The repetition, in "*N'aie pas Peur*" (287), of the mother and child in "Come along," spread widely last year by the Art-Union of London, is not agreeable.

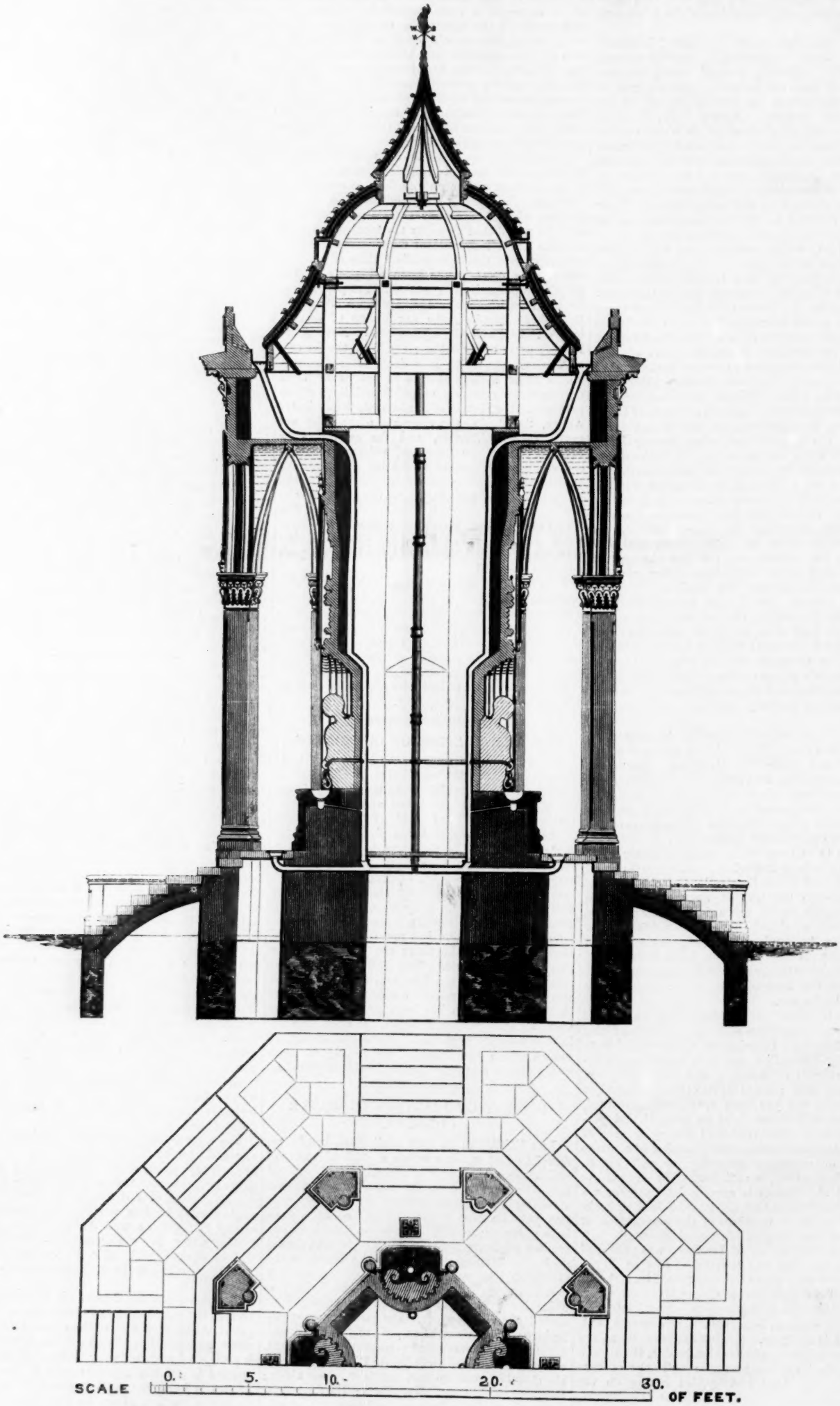
MISS COUTTS'S DRINKING FOUNTAIN IN VICTORIA PARK, LONDON.

WE said some time since that a drinking fountain of some magnificence was in the course of erection in Victoria Park at the cost of Miss Burdett Coutts. The accompanying engravings illustrate it. The design consists of an octangular building, 12 feet in diameter, approached by eight flights of steps, in a podium, 3 feet 6 inches high, and 40 feet in diameter. On four of its external sides are situated granite pedestals and basins, with niches above them containing sculptured figures of Sicilian marble, from which the water is supplied. Three of the alternate sides are enriched with panels of green and red marble, and are ornamented with tracery, carved in the ashlar, and filled in with mastic. In the fourth side, a richly moulded doorway leads to the interior of the octagon, where the arrangements for the water supply are under direct control and inspection. Surrounding the octagon and connected with it by groining, is an arcade of eight arches, springing from piers of polished red Aberdeen granite, with sculptured caps and bases. Immediately above the crown of the arches, the spandrils of which contain moulded panels of polished marble, is a bracket cornice, enriched in a similar manner. This is surmounted by a perforated parapet, from which rises a domical leaden roof to the height of 57 feet above the ground level.

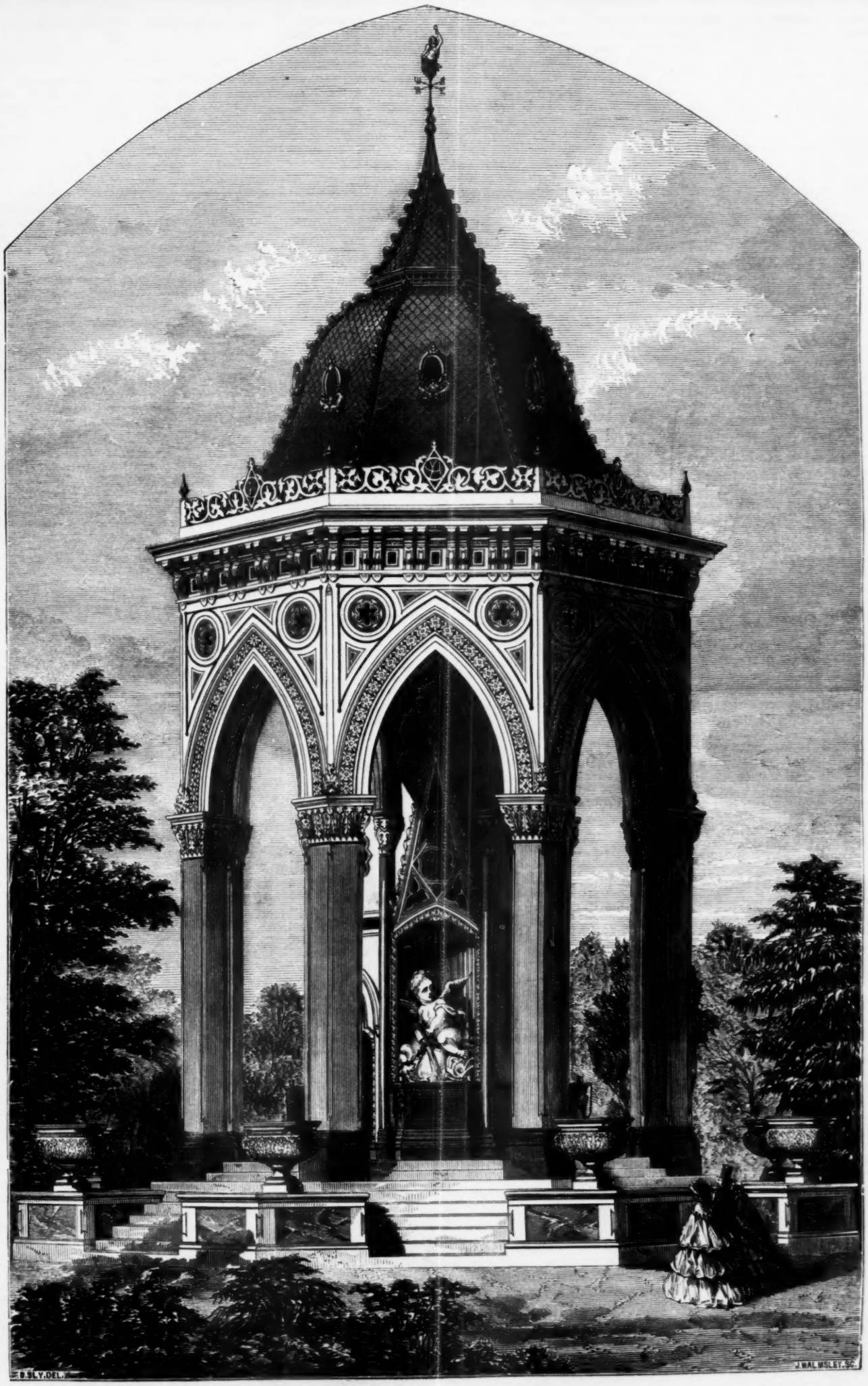
The materials employed in the work are Kentish rag and Gazeby stone for the podium and steps; axed grey granite for the plinths; polished grey granite for the moulded bases and pedestals; polished red granite for the piers and angle shafts; Sicilian marble for the figures which supply the water; and Aubigny stone for the carving and ashlar work generally. The total cost will be about 5,000*l*. Mr. H. A. Darbishire, of Trafalgar-square, is the architect, and is entitled to credit.

The position of the fountain in the park is very near to the gymnasium, not far from the Hackney gate. At present the podium and the steps are alone executed, but almost all the moulded work is completed and ready for fixing. Much of the granite is on the ground: one of the marble figures is being executed in the marble, and the models of two others are far advanced. Had not the strike intervened, the building would have been finished in June. Thus it is that acts react, and good is delayed.

DRINKING-FOUNTAIN, VICTORIA PARK, LONDON.



Section; and Plan of Half.



PUBLIC DRINKING-FOUNTAIN IN VICTORIA PARK, LONDON.—MR. H. A. DARBISHIRE, ARCHITECT.

SIR CHRISTOPHER WREN AND HIS TIMES.

LECTURE AT THE ARCHITECTURAL EXHIBITION.*

IN laying out an hour's gossip about Sir Christopher Wren and his times, let our point of departure be the middle of the seventeenth century—say the year 1650. In public history, the previous year marks the execution of King Charles I., and the establishment of the Puritan ascendancy. In the history of our particular art, the year following marks the close of the career of Inigo Jones. This year 1650 itself finds the individual who was destined to be the more illustrious successor of Jones, a youth of eighteen, studying at Oxford.

I need not tell you that the England of that day was not the England of this, and London then a very different thing from London now. The population of the kingdom in 1650 was not more than double that of its metropolis in our day—not, perhaps, more than five millions. Full half the surface of the country lay waste as forest, moor, and fen; and wild deer in thousands roamed within ten miles of where we are now assembled. London, although, as at present, the largest city in Europe, held but one-fifth of its present population. Amsterdam was its rival. The second cities of England were Bristol and Norwich, each containing about 25,000 inhabitants. York and Exeter followed, with about 10,000; while Liverpool, Birmingham, Leeds, and Manchester, were little towns of from four to six thousand souls. The metropolis itself was chiefly a collection of timber houses, with a dilapidated Gothic cathedral in the midst, and one solitary bridge spanning the Thames in the form of a row of houses. Westminster Abbey stood at a distance, and marked where the court resided, out of town. The aristocracy dwelt in the Strand, Lincoln's-inn-fields, and Covent-garden. Chelsea was a country village, Mary-le-bone and Finsbury pasture fields, Islington a solitude, St. James's vacant, and the spot at present beneath our feet a pleasant meadow, which contained a famous spring or conduit. The shops of the citizens were distinguished, not by modest numbers ranging along the streets, but by the grotesque signs at present appropriated by taverns, and these not inscribed in words, but painted in effigy, or no one could have read them but the learned. Street-lighting was a thing to be wondered at. The refuse of the town waited patiently in heaps till a rainy day enabled it to sail composedly down the gutters to the river. Newspapers there were none, nor post-office, except in embryo; nor even coffee-houses, where the citizens of another generation used to chat over public affairs. The goods of commerce were carried on packhorses. The first stage-coach in England had not yet set out by twenty years. The days of Queen Bess were scarcely half a century bygone, and another half-century carried back well-remembered traditions to the time of bluff King Harry, which lay beyond the reign of Bloody Mary. Well-remembered traditions we may well say; for the blood, which was the life of them, still flowed in the veins of Englishmen; and the struggle of tradition with tradition, and hate with hate, had now at length only come to a crisis. The divine right of kings had perished on the scaffold, and straight-haired Theocracy reigned in its stead. And thus we may consider ourselves introduced to Sir Christopher Wren and his times.

With regard to the architectural practice of the period, this may be explained in very few words. The modern Classic style of design, which, upon the overthrow of the obsolete Mediæval systems, alike of society and of art, had grown up in Italy in the sixteenth century, had spread westward by degrees over the whole of Europe. In Italy itself Bramante and San Gallo, Vignola and Buonarotti had given place to Palladio and Scamozzi, and these at last to Bernini and Borromini. In Spain, by this time a warring power, the new manner had long established itself, although, perhaps, to little purpose. In France, now rising into great influence under the youthful Louis Quatorze, that which Vignola and Serlio had introduced, and Delorme and Bullant adopted, Perrault, Le Veau, Le Mercier, and Mansard were preparing to carry still forward. In England the introduction of the new style had been later. Under James I. and his unfortunate son, Inigo Jones had exhibited the fruits of Italian travel in the Whitehall Banqueting House, in Somerset House, and in numerous other more or less excellent works; and now, or in another ten years, it was to be discovered that his mantle had fallen upon Christopher Wren.

Further to connect and compare together England, France, and Italy of that day, let it be remarked that, not more than two or three years before our starting-point of 1650, the great cathedral of St. Peter, at Rome, had been pronounced complete, after the labours of nearly a century and a half; it having engaged the attention of nineteen successive popes, and more than half as many architects, of whom Bernini was the last. Fifteen years after our date, in 1665, we shall find Wren a traveller to Paris, where he obtains an introduction to Bernini, and by that means a glance,—with but little welcome, however,—at his designs for the Louvre; to prepare which, the famous Italian had been specially invited to the French capital by the king. Two years more, and we shall find the building of the Louvre, which had been brought to a stand at the foundations by the departure of Bernini in dudgeon, resumed under Perrault. Still, six years forward, and Wren is at work upon the design for St. Paul's, the foundation-stone of which he lays, after two more years, in 1675, twenty-eight years from the completion of St. Paul's, by Bernini, and 111 years from the death of great old Michelangelo.

Thus much for the condition of architecture at our datum point. But if we are to deal with the entire character of Christopher Wren, it will be desirable that we take a glance none the less at the general science at that time. For the merits of our great architect as a philosopher are such as not only to shed additional lustre on his architectural name, but to reflect honour on the very art itself with which so good a man in science is identified.

Taking again our point of view at 1650, look a quarter of a century back, and then a quarter of a century forward. At the past date died Bacon: at the future date there will appear Newton. The memorable principles of inductive philosophy have been established by the former: the latter, by application of these principles, will show the way to the laws of the universe. The position of science, therefore, at our date of 1650, is in a manner midway between these points, midway between Bacon and Newton—between the "Novum Organon" and the "Principia." During the lifetime of Bacon, the new method of thought was not universally or even generally understood; but already the minds of educated and thoughtful men are bent earnestly upon it in the initiative problems of positive science.

There stands in honourable rank amongst these thinkers an Oxfordshire clergyman, a learned, accomplished, unobtrusive gentleman, by name Dr. Christopher Wren, Dean of Windsor and Wolverhampton, and Registrar of the Order of the Garter. He is the younger brother of a still more notable although less pacific churchman, Dr. Matthew Wren, Bishop of Ely, who is in the Tower, by the bye, at our date of 1650, and has been there for ten years back, and is destined to remain there for ten years more,—for conscience sake, as he sternly considers it; for reactionary superstitions and Popish practices, say the other side, and remorseless persecution of the saints. The young student at Oxford, who is our subject more especially, is the son of Dean Wren, and a nephew, therefore, of the bishop. And already, at eighteen, he adds a third distinguished name to the family, and great expectations are entertained of his future eminence. Many years afterwards, when this youth has passed through a very long and famous career, and passed away to the rest of the honourable and the just, his son records the lives of these three celebrated ancestors in the well-known book, the "Parentalia;" and if the following peroration of his preface is characterized by a good deal of the euphuism of the time, its compliments are at least not undeserved. "The memory of some men," he says, "is like the rose and other odoriferous flowers, which cast a sweeter and stronger smell after they are plucked: the memory of others may be said to be like the poppy and such vegetables, that make a gay and specious show while they stand upon the stalk; but, being cut and gathered, they have but an ill-favoured scent. The worthy persons exemplified in these records may be compared to the first sort, as well for the sweet odour of a good name they had while they stood, as also that they were cut down by the common stroke of mortality."

The only son of Dean Wren was from his childhood of a diminutive and weakly frame; but the mind is the stature of the man, and the worthy clergyman and correspondent of philosophers discerned in his boy the evidences of a quick and powerful intellect. He, therefore, took pains with his education, and presently enjoyed delight, beyond perhaps his expectation, in seeing his labours bear fruit. Setting aside such a circumstance as the invention by the youth at the age of thirteen of what is called an astronomical instrument, and its dedication to his father in pompous Latin verse; it appears to be unquestionable that, when sent to Oxford in his fourteenth year, such was the power of his genius that he speedily came to be looked upon, not only as a favourite, but a prodigy, even amongst learned men. Before the age of sixteen one of the most eminent anatomical lecturers of the age, Dr. Scarborough, was able to employ him as demonstrating assistant. He had also by this time taken out a patent for a *penna duplex*, or double writing instrument: he had also invented a weather-clock, and he had produced a treatise on spherical trigonometry. By his eighteenth year there seems to have been a continual succession of learned mathematical essays and ingenious mechanical inventions bearing his name, of which the versatility was marvellous. He made the drawings for Dr. Willis's treatise on the brain. In conjunction with the after-celebrated Hooke, he worked out a novelty, which he called *Micrographia*; namely, the delineation of microscopic objects on the magnified scale. As a mathematician he presented investigations of the newly-discovered Cycloid: in astronomy, he offered a theory of the planet Saturn: in mechanics, he is considered to have done something in perfecting the telescope and the barometer; and in anatomy, he claimed to have originated the process of transfusion. "The most considerable experiment," he says, "which I have made of late is this:—I injected wine and ale into the mass of blood in a living dog, by a vein, in good quantities, till he became extremely drunk." And coming thus at last to our datum point of 1650, an introduction on the part of Bishop Wilkins to the Elector Palatine of the Rhine produces an epistle from the juvenile *savant* to the distinguished visitor, from which it may be worth while to read an extract, as a sample both of the literary style of the period and of the mind of the writer. The lecturer then read the letter signed "Christopher Wren," in page 183 of the "Parentalia," to "His Most Illustrious Highness Charles, Prince Elector Palatine of the Rhine," &c. In his eighteenth year he was Bachelor of Arts: at twenty-two he becomes Fellow of All Souls' and Master of Arts: he has been for years a leading spirit in those learned *conversazioni* out of which, ten years afterwards, arose the Royal Society; and the language which is used concerning him in the diary of Evelyn is such as this:—"That prodigious young scholar," "that miracle of a youth, Mr. Christopher Wren, nephew of the Bishop of Ely;" "that rare and early prodigy of universal science."

To return now to architectural matter, let us notice the death of Inigo Jones. When his royal patron stepped forth from that melancholy window of Whitehall, the illustrious surveyor-general had attained the age of seventy-seven. But for the distractions of the times, during the latter part of his life, under the unfortunate Charles, the refined tastes of the Court, operating through the genius of so great an artist, might have set in motion on a much more effective scale the progress of the Palladian manner of design in England; but the troubles of the State prevented the growth of art; and the ultimate triumph of the Puritans came like a blight upon it. When dragoon horses were stabled in cathedrals and the lecture-halls of science, we are not surprised to learn that the only consideration accorded to such a man as Inigo Jones was his recognition as a papist, the infliction of a ruinous fine, neglect, and obloquy. We might say that when he died England possessed no architect worthy of the name of his successor: it might be more to the purpose to remark that a government composed of men who (to use the words of Macaulay) "groaned in spirit at the sight of Jack-in-the-green, and thought it impious to taste plum-porridge on Christmas-day,"—who closed the theatres and flogged the players, and christened their children out of the Book of Nehemiah, would have had only more kicks than halfpence for so worldly-minded a dog as an architect. With no desire to disparage the merits of Oliver Cromwell, we may be permitted to believe that it was a beneficial thing for art, whatever it may have been for religion, or even for English honour, when the profligate and mean-spirited son of the slain king was restored to the throne, with acclamation.

At the date of this event, 1660, after twenty years of Puritanism, it seems really questionable whether there existed in England a single individual who professed architectural design as his calling. The person appointed Surveyor-general in the room of Jones, long deceased, was selected upon no such theoretical grounds, but upon the

* Read by Mr. Robert Kerr on Tuesday evening last, Mr. Ashpitel in the chair. The meeting was a full one.

purely practical consideration of services rendered to the royalist cause: he was Denham, the poet. Accordingly, when the new king and his courtiers began to make themselves at home, and to look about them, and to contemplate grand operations, —the reparation of St. Paul's, the improvement of Windsor Castle, the building for his most excellent Majesty of a new palace at Greenwich, and the like,—it necessarily became a question of some importance where they were to look for a person to do the work pertaining to the office of worthy Sir John Denham. In this quandary, it appears that some judicious friend advised the sovereign to send for a certain Mr. Christopher Wren, nephew of the old Bishop of Ely, just liberated from the Tower,—a prodigious scholar, no doubt, it was said; a miracle of genius; a young man vastly skilled in the knowledge of architecture, as in everything else.

To speak now of the scientific career of Wren, his reputation during the last few years of the Puritan time was still advancing. In 1657 he removed from Oxford to London, having been elected Professor of Astronomy in Gresham College. His age was then twenty-five; but such was his celebrity, that his inaugural address was the event of the day amongst the learned. But it is curious to note in this discourse of his, as an indication of the character of thought at the time, in the midst of what is often the closest reasoning, a proposal of several hypotheses whereby to account for the going back of the sun ten degrees on the dial of king Ahaz; as also a solution of the proposition that Christ was three days and three nights in the tomb between a Friday and a Sunday, on the ground that he died for the people at the antipodes as well as here; so that when it was a day on one side and consequently a night on the other, both the day and the night ought to be counted separately. In 1658, Oliver Cromwell died; and the disorder which ensued compelled the young professor to seek shelter again in Oxford. Gresham College became quarters for the soldiery. "This day," writes a friend to him, "I went to visit Gresham College, but found the place in such a nasty condition, so defiled, and the smell so infernal, that if you should come now to make use of your tube" (referring to some of the experiments of the day), "it would be like Dives looking out of hell into heaven." He did not return, however, to his professorial chair in the City of London; for immediately after the Restoration he was appointed Savilian Professor of Astronomy at Oxford. A few months afterwards he was sent for by the Government, as we have before seen, in the capacity of an architect. About the same time it was that he received the degree of Doctor of Civil Law at Oxford, and almost simultaneously the same degree at Cambridge. His age, as we before remarked, was only then twenty-eight.

Speaking of his connection with the progress of science, we must not omit to mention the institution of the Royal Society of London at the time just referred to; the date of its charter being 1662, the year following that of the Restoration. In this important transaction the young philosopher was one of the moving spirits. The little society of the votaries of science which had been formed in his student days at Oxford had formed an almost identical cluster round him in London, by the habit of meeting at his Gresham lectures. They were called "the club." Dispersed for the time by the consequences of Cromwell's death, they rallied again when the Restoration restored personal safety to the lieges; and one of the earliest acts of the young king was to grant his royal approval, followed speedily by a royal charter, in which the name of Dr. Christopher Wren appears in the list of the first council of the body. There might probably have been two Doctors Christopher Wren on this most honourable register; but that the excellent Dean of Windsor, himself a promoter of "the club," had passed from this life, at the age of sixty-nine, just before the time when he would have had to welcome the decease of Cromwell as a sudden burst of sunshine after storm.

There seems every probability that the court patronage which now fell to Dr. Wren in the character of an architect was, in some degree at least, due to the influence, whether personal or not, which his uncle, the restored Bishop of Ely, could not fail to possess at Whitehall. Nothing can better illustrate the state of affairs at the time than the family relationship existing between a person so gentle and even retiring as we understand our young *savant* to have been (to say nothing of our strong suspicion that he was of Low Church views), with a violent, uncompromising zealot like this old Churchman. The history of Dr. Matthew Wren is one which becomes graphic without an effort. In early middle life King James appointed him chaplain to his son, that he might accompany the young prince to Spain, and give him the benefit of his astuteness in dealing with a wily people. Twelve years afterwards, in 1633, King Charles made him Bishop of Hereford. Two years more and the see of Norwich fell vacant; so that it became desirable to find out some resolute disciplinarian to whom to commit the pastoral care of a people always hard to govern. Dr. Matthew Wren was the individual selected, avowedly on account of his ungentle hand. He ruled the East-Anglian diocese with a rod of iron for three years, and then exchanged it for the see of Ely. If one dared to hint that so invincible a champion had met his match, it might be suggested that the nonconformists of Norfolk had made the place too hot to hold him. Sure enough, when the Long Parliament found itself sufficiently strong to deal with the enemies of its faith, the indictment issued against the Bishop of Ely, late of Norwich, was of the weightiest kind. Never man had done so much resolute work of its kind, in so short a time, as had Dr. Matthew Wren done at Norwich during his three brief years of government. He had set up idolatry and superstition, and had himself practised the same. No fewer than fifty "godly, learned, and painful ministers" and "powerful preachers" he had excommunicated, deprived, and banished. Three thousand weavers, of tender consciences, who declined to agree with him in opinion, he had driven out of the country; so that they had to seek hospitality of the Hollander, to the great detriment of trade. He had established Popish ceremonial; and, by even pulling down and reconstructing the church pews, had compelled the people to face the east in spite of themselves. Lastly, he had exacted tithes literally at two shillings in the pound. So he was cast into prison; and, there being as yet no Habeas Corpus Act, there he remained. The writer of the "Parentalia" calculates, with what Burke calls "delightful horror," how many times the circuit of this great globe the indomitable martyr had accomplished in pacing up and down a certain leadflat in the Tower during twenty years. He also tells us of what might seem a very fair offer which he had of liberty, and of what must be called a very unceremonious way in which he received it.

"Some space before the decease of Oliver Cromwell, Mr. Christopher Wren (only son of Dr. Christopher Wren, and nephew of the Bishop of Ely), became acquainted with Mr. Claypole, who married the usurper's favourite daughter. This gentleman, being a lover of mathematics, had conceived a great esteem for him, and took all occasions to cultivate his friendship, and to court his conversation, particularly by frequent invitations to his house and table. It happened upon one of these invitations, that Cromwell came into the company as they sat at dinner; and without any ceremony (as his usual way was in his own family) took his place: after a little time, fixing his eyes on Mr. Wren, 'Your uncle [says he] has long been confined in the Tower.'—'He has so, sir, but bears his afflictions with great patience and resignation.'—'He may come out if he will.'—'Will your Highness [so he was called] permit me to tell him this from your own mouth?'—'Yes, you may.'—As soon as he could decently retire, he hastened with no little joy to the Tower, and informed the Bishop of all the particulars of this his interview with Cromwell; upon which his Lordship expressed himself warmly to this effect: —'That this was not the first time he had received the like intimation from that *miscreant*, but disdained the terms projected for his enlargement, which were to be a mean acknowledgment of *his* favour, and an abject submission to his detestable tyranny. That he was determined patiently to *tarry the Lord's leisure*, and owe his deliverance (which he trusted was not far off) to *Him* only.'"

The problem has long been one of difficulty, how to account for the circumstance that when a man had to be found who should stand in the shoes of Inigo Jones, this was a young professor of astronomy, a demonstrative anatomist, a micrographist, and what not,—anything and everything,—in short, but an architect, or even a builder.

Now this seems to me to be the explanation. It may be affirmed that it was, in those days, more or less, a matter of mere classical erudition, that a man of learning, if he possessed the faculty of imagination in any degree, or even the elements of antiquarianism, should understand something of the orders of architecture. And no doubt there would be many such who, draughtsmanship apart, might understand more or less of their application or criticism, in either case a comparatively simple system, as we know, in that style of design. It is possible that, even in the instance of Mediæval works, this suggestion might furnish a favourable theory for the explanation of those traditions which so often assign the composition of the most important monuments of architecture to leading men in the church; that is to say, leading men of learning, in whom leisure, scholarship, and a cultivated taste so often have led to the always fascinating study of the grandest of the arts. At all events, as regards the seventeenth century, it is matter of certainty that such men as Dr. Aldrich, dean of Christ Church, Oxford, and Sir James Burroughs, master of Caius College, Cambridge, of our own day, were accomplished critics; and that in the paucity of professional skill these learned amateurs were even obliged to act as practical designers and constructors. And such a person, in less degree, there appears reason to believe was the worthy Dean Wren, of Windsor. There is even a tradition of his having been entrusted with the preparation of a design and estimate of cost for a domestic work for the Queen of Charles I. Without absolutely reasoning in a circle, I think it may be said to be not at all unlikely, viewing the career of his son, that such a tradition may be fact; and if so, that such a fact will well explain the origin of his son's aptitude for the art. Amongst other subjects of interest, I conceive, to which the learned and accomplished dean had directed the attention of his boy, there would be architecture, very probably as illustrated in the volumes of Palladio; and amongst those subjects of which in subsequent years the worthy father would encourage the study on the part of a son so versatile, in the whole range of scholarship, there would still I think, be this. Indeed, we may go even further, and assert that the extraordinary ingenuity of his construction in after-life, and the equally extraordinary grace of his design, may be held to prove to demonstration not only that the young philosopher had early attached himself to the mastery of architecture, but that he possessed also that inherent genius which compelled him to the study, and rendered its mastery of easy attainment. Accordingly, if all this be fair argument, we have thus, I think, a reasonable clue to what must otherwise be merely marvellous, and, therefore, uninstructive. When, in short, King Charles was advised to apply to young Mr. Christopher Wren as an architectural adviser, it was because he had long been an amateur of architecture; and, possessing as he did such unusual powers of ingenuity and taste, was well known to be capable of the accomplishment of any task upon which, in that province, he might choose to exercise his mind. It seems only to be matter of regret that good Dean Wren himself did not live to see the day.*

THE BEDWAY OF BUILDING-STONE.

In the last year's volume of the *Builder* there was inserted, under the signature of "C. H. Smith," a paper on the above subject, which has been brought to my attention; and, understanding that there has not been any reply to it tending to elucidate the matter, except a few words confined to Bath stone, and admitting the difficulty of judging of the original bedway, but suggesting that the "quarryman should put chisel marks upon the stones as quarried," I am induced to offer a few observations, which I do from having had a life-experience of quarries and of quarry-work.

On the greater quantity of smaller material sent from a quarry, it would be so nearly impracticable to mark each stone, and cause such intolerable delay that such a rule or order would, or could, never be complied with; and in the larger scantlings, however practicable, and at times possibly useful, I can scarcely imagine a case where, with a reasonable knowledge, it would be necessary.

2. I believe I am safe in saying that a thorough quarryman, such as probably Hugh Miller was originally, would have no difficulty whatever in ninety-nine cases out of the hundred, in at once assuming correctly "the setting-way," as it is called, of a stone; and if a momentary doubt arose, he would set it at rest by an almost imperceptible tip of his hammer, to bring off a little shell or scale from the edge.

3. I will admit that, even after half a century's experience of quarry working, and I might say, an enthusiastic love for what amounts to, at times, a scientific and pleasurable out-door occupation, the men who did the greatest drudgery of the work,

* To be continued.

and whose profit depended on the accuracy of their practice, far surpassed me in the quickness of their decision as to what they call the "going-way" of a stone; although I might be able, and, indeed, always was able to surpass them, in judging and proving what form was *in*, or could be got from, a stone.

4. The fracture, the form, the face, or rather every face and every angle, are all guides to the prompt decision which, in cases of doubt, as I have said, are assisted by the scabbling hammer, or that of a mason, which should be of an oblong form on the largest face, square at its angles, and well steeled.

5. The power, to instantaneously judge of the bed-way of a stone, like the secret of O'Sullivan, the whisperer, may remain with the possessors, and be of no use to the working or employing public, if we cannot find words, in some measure to describe what must with practice lead to a knowledge of it; and it is, therefore, I make the trial.

6. To elucidate what I have observed in paragraph 4, as to the fracture, form, and face, it may be observed of all stones,—at least, as far as I have had experience,—that the formation may be looked upon, for exemplification something in this way,—an imaginary stone to be built up, as it were, of oyster-shells, in say an oblong mould, about one foot high and wide, the shells all put rough or round sides down, and breaking joint, as much as possible; then suppose when the mould shall have been filled, in the interstices, with some cohesive and hardening substance, having an intense affinity for them, run in, so as to convert the whole into stone,—

7. I need not say of such artificial stone (the mould removed), which would be the setting-bed or bed-way; of course it would be as it was built. So in nature, as assumed to be formed. But in quarrying stone there are other points essential to be known, and which practice points out, and these are, that of all the ways a stone can be cut or divided (with wedges), or pooled (by holes jumped, and "plug and feather"), or scabbled, the bed-way, or "going-way," as quarrymen have it, is the easiest and surest, as it would be in the shell-made stone.

8. The second, or next best going way, as can be imagined from the shell formation, would be lengthways *perpendicularly*, or, as it is called, a "*down cut*," the first being called a breast or boarding-cut. At the "down-cut," the Cornish men are famous hands, as they pool accurately and quickly with their long jumper-bars without hammers, but they cannot, as far as I have seen of them, work the boarding cut or bed with the Irish quarrymen.

9. There is an advantage and saving of labour by the down-cut, where suitable, as it places all the work under the quarryman, both the pooling for and the striking of the wedges, that nearly, if not altogether at times, counterbalances the facile advantage as to cleavage of the bed-way or boarding cut, which, having to be all wrought, and the wedges struck by muscular force, with scarcely any aid from gravity, is a labour that is as much as possible avoided, and would be well and wisely superseded by machinery, as greatly economising labour, and rendering the material produced more valuable by giving obviously more (true) setting beds.

10. The third or worst going-way of a stone is right across: in that way all stones are more or less tough and reluctant. In fact, the more they are so the better for steps, stretchers, lintels, or spans of any kind; and no practical mason would attempt to knock off an over-length directly with his hammer: if without any other tool he would strike it in from the end (still the going-way) and so thinning by degrees, until the strength would be reduced to greatly less than the main scantling, he would charily bring it to the dimension wanted.

11. The judging of these different ways of a stone is no matter of fancy, nor is it necessary that the quarryman should look so much to the building as to the block he has undertaken to produce: it is with him a necessity, or his waste will be larger than his work. He will use the ordinary care in the bed-way or boarding-cut, and when that is so raised or ventilated, that the friction of the surfaces shall not impede further operations, then,—

12. The quarryman puts in his longitudinal cut, perpendicularly, probably rolls out his block, and looks to the overlengths. If the block be long enough to make two of what is required, there is but little difficulty; for while the weight or cubical content is the same at both sides of the proposed cut, it will, with scarcely a possible exception, go down at right angles. And this can be well exemplified by the breaking of common white or loaf sugar with a knife and a hammer. But if the cut be to one end, and the piece be too large to be scabbled off in the indirect way I have pointed out (10), then the wedges or pool-holes must be placed as if entering the main body of the stone, at an angle of about ten degrees from the perpendicular, but which practice only can define to a fraction, so as to balance the inclination of the wedge *in*, against the tendency of the cut to run *out*, and so take off but a useless shell, or wedge-shaped piece.

13. Besides the indication afforded by the face, form, and fracture of a stone, there is, to a delicately-trained ear used to the ring of the hammer, a shade of difference in the *sound* when, where, and how struck, as there is a visible difference in the pieces when scabbled; but with all the hints it is possible to convey, from face, form, fracture, sound, sight, and the length and breadth of fresh cleavage, there is that which cannot be learned truly but by years of attention to it. As we cannot learn perfectly the Indian's mode of hearing and judging, in the pathless forest the position or proximity of a friend or enemy, so nothing but *necessity* and practice for years will give an instantaneous knowledge of the bed-way of stone.

14. In England, where, in some places, quarries are remote, and, at least in London, where there is such a division of labour, a man might be an excellent mason, and yet never have seen a quarry, or a stone on its natural bed before being turned out; and, therefore, he could not be quite *au fait* in judging of the setting-bed or bedway of it; but a quarryman, who may probably have contracted to furnish and deliver to a railway station, a dock, or a harbour, a number of blocks of a certain and often difficult size, must, to succeed, of necessity acquire the accurate knowledge I have endeavoured to describe,—1st, as every stone must stand to the cubical contents required by the specifications; 2ndly, as every pound extra carried by his team, even if not objected to at the station, acts as the tax of *ignorance* on *industry*; and, 3rdly, because every failure in the quarrying, or by breakage in the reduction after being quarried, would still further reduce his remuneration.

15. In conclusion, I will admit that it is possible a stone might be met with where judgment as to bedway might be doubtful or impracticable, but, in five and forty years' experience, I have never met such; indeed, it was a common practice of mine, and no doubt it was the habit of others professionally engaged, on entering or passing through a district where works were proposed or about to be effected, to look sharply to "the resources of the inhabitants" in the building way, and if we saw very many quoins and jambs to either court or cottage, ancient or modern, placed on edge or not on the bedway, we concluded that fair-faced or readily-worked stone was difficult to be had in the vicinity, or must have been, and thus, from necessity, the natural and solid bed was propped up to form a face,—a practice which experienced builders would not allow, nor would an old engineer used to

QUARRIES.

THE CLERKS' WELL, CLERKENWELL, AND THE GATEWAY IN SMITHFIELD.

IT was only the other week that we directed attention to this interesting London landmark; fearing that, in its neglected condition, it might become lost to the view. Although this seemed so probable, it was with some surprise that, in passing by the ancient site, we heard an elderly lady saying to a pavior who was working close by,—"Mr. Workman: on this spot stood the Clerkenwell pump: can you tell me who has removed it?" The workman was not aware; and the lady expressed a very decided opinion, that a memorial so particularly connected with the parish and its name could not be removed. "But, marm," replied the pavior, "you see it is gone." In a state of some excitement, and very indignant, the venerable but energetic lady departed; remarking that in these days it would seem that "they can take down and demolish anything." The writer also made inquiry, but could gain no intelligence of what had become of the inscription, which had been placed there, in very good taste and with the best intentions, by two Clerkenwell churchwardens half a century or so ago. On this memorial, as our readers know, was a very interesting record of the great antiquity and historical interest of the Clerks' Well; and, considering how few of the relics of the past have been spared to us, we regret to lose sight of this one. Wondering if it had been carried of and disposed of, by the desperate characters in some of the adjoining alleys, at one of the old rag and iron shops which abound in this neighbourhood, we went our way; hoping, however, that the parish authorities may have removed the inscription just for a time, and that when the ruined conditions to which we have alluded have been altered, it will be replaced. Nevertheless, many persons would be glad to feel certain on this point. Passing on to Smithfield, in doubt about the Clerks' Well, we again note the ill state of the gateway of the once famous Priory of St. Bartholomew's, which for 800 years has stood the wear of time and the dangers of the several fires which have happened here. In the course of a short space of time this now miserably neglected but most interesting site will, in part, be usefully occupied, and the remaining part tastefully disposed of. When this work is going forward, we trust that the ancient and picturesque gateway of St. Bartholomew's will not be allowed to vanish like the Clerkenwell pump; but that means will be taken for its careful restoration; so that, in the centuries which are yet to come, when human intelligence has marvellously increased, the future generations may still have this characteristic specimen of architecture to look at, and remind them of dark and troubled times, which will make their improved conditions of knowledge, liberty, and prosperity seem more bright and pleasant by the contrast. Important historical events have happened close by this gateway: martyrs for conscience sake have passed through this gateway, and been destroyed by burning and otherwise. In other particulars the pages of past history are intimately connected with this spot; and, as has been before mentioned by us, the position of the affairs of the parish of St. Bartholomew's the Great makes it almost impossible for them to undertake the care of the gateway. It is, however, a relic of such general interest, that it should certainly be preserved in the City. We therefore trust that the corporate authorities will use such exertions as will be the means of restoring this gate. If placed in skilful hands, this could not be a very expensive affair.

THE LABOUR QUESTION.

Brighton.—The employers of painters, bricklayers, and carpenters, have had a meeting here, to consider the present state of the labour-market, and the present system of payment. It was attended by forty-five employers. The meeting was called in consequence of applications made by the men, particularly the painters, for increased payment. The subject was very fully discussed; and eventually the following resolution was submitted by Mr. John Fabian: — "That, on and after the 6th of May instant, all workmen employed in the building trade be paid by the hour." This was carried unanimously.

Gloucester.—The journeymen painters of this city, thirty-six in number, are out on strike. Their present rate of pay is 3s. 6d. per day, and they want an increase of 3s. per week, to which the masters refuse to accede.

Blackburn.—The dispute between the master joiners and builders and their operatives has assumed a new phase by the employers having advertised that they are in want of workmen, who are to be paid at the average rate of 5½d. per hour, without any limitation as to the number of hours to be worked, except that they will accept fifty-five hours as a week. In reply to the advertisement, the men have placarded the district, stating, — "The masters have no occasion to advertise for men, as we are quite willing to resume work if they are willing to relinquish the hour system, and grant us that privilege which is now enjoyed by many other trades, and what they have already promised to us, viz., the Saturday half holiday."

Edinburgh.—We understand, says the *Scotsman*, that a proposal for a conference, on the footing of the resolutions passed on Wednesday, at the general meeting of Associated Employers, was sent on Saturday to the Operatives' Society: the latter, however, we are informed, declined to meet with the employers unless the resolutions were withdrawn. The masons' co-operative scheme is progressing, though somewhat slowly and cautiously; and it is said that a considerable number of "nine hours' men" are getting jobs in Edinburgh and Leith.

Belgium.—Strikes have not hitherto been common among the manufacturing population of Belgium; but we now learn that a dispute between some of the millowners and weavers of Ghent has caused serious disturbances, during which the police were compelled to use their arms, and several persons were wounded.

NITROGEN IN STEEL.

IN 1846, as it appears from a communication in the *Engineer* by an Edinburgh correspondent, Mr. Christopher Binks (an able correspondent of our own, by the way) proposed gaseous cyanogen and compounds yielding it in the formation of steel; and in 1857, as we observe from the *London Review* of 20th ultimo, he demonstrated, in a long and elaborate paper read before the Society of Arts, as the result of a vast number of experiments, that the substances whose application to pure iron is requisite in the conversion of it into steel *all contain nitrogen* and carbon; that the residual matter got from the analysis of steel is an azotized or nitrogenized carbon; that neither carbon nor nitrogen alone will convert iron into steel,—and so on; in short, fully and scientifically *proving* that nitrogen is absolutely requisite, as well as carbon, in the production of steel. In this country, however, as the *London Review* severely but truthfully remarks, "the practice seems to be that no English discovery attracts any attention until it has passed some years abroad and then comes back to us as the original production of a Continental *savant*;" and no wonder, therefore, we may add, that Carlyle defines England as a country inhabited by a population of nearly thirty millions, "mostly fools." The benefit of this species of folly is frequently reaped by our French and American brethren; and so it is in the present instance. A Mr. Fremy has just been producing, with Mr. Binks's results, "a profound sensation" amongst the astute Academicians at Paris, who have received them as a highly important discovery by their countryman M. Fremy; and a Mr. Fleury in America is laying claim to the very same discovery. It is a notable circumstance, and curiously accords with all we have ever and anon been saying as to the wonderful depth and universality of ancient Eastern knowledge, that the celebrated Indian steel called "wootz" is *always* made with materials amongst which is an abundance of nitrogenous as well as carbonaceous matter: thus the wood used is the *cassia auriculata*, and the whole is covered with the *convolvus laurifolia*, both rich in nitrogen.

SCOTLAND.

Roslin Chapel.—About two years ago the Earl of Rosslyn consulted an architect as to the practicability of repairing the greatly-decayed stones in some parts of the east end of this chapel; and, shortly afterwards, gave orders for the sharpening of some of the stones, and the relaying of the pavement in places where it had been broken. The work thus begun has grown from less to more, until the whole east end, known as the Lady's Chapel, has been overhauled. Almost all the carvings of this part of the buildings have been gone over with the chisel, and sharpened. Where this could not be done, from the stone being too much decayed, a new stone (*fac simile* of the original) has been inserted, and afterwards stained of the present colour of those around it. The most serious and startling change is that which has been made on the appearance of the exquisitely ornamented column, popularly known as the 'Prentice Pillar, though properly the Princess Pillar, so named in honour of the Princess Elizabeth Douglas, the wife of William St. Clair, prince of Orkney, the founder of the chapel. An Edinburgh paper says it would scarcely be recognized now, so great is the change that has been made upon it. The lime with which it had at one time been overlaid, accidentally or otherwise, has been taken away: and the green lichens, that rendered it an object of so much attraction to the artist, have been washed off, so as to show completely the character of the stone of which it is composed. From its having been constructed of alternate layers or courses of brilliant red and yellow sandstone, it now, says this paper, presents a gay appearance which, at first sight, is somewhat out of keeping with the rest of the building, and can scarcely fail to be displeasing to those who admired its look of stained and mouldy antiquity. Mr. Laurence Baxter, under the superintendence of Mr. David Bryce, R.S.A., has executed the new carvings. With the exception of new steps to the north and south doors, no alterations are contemplated in the other parts of the chapel.

New Church at Aberlour.—The re-building of the church of Aberlour has been contracted for, the estimates accepted being as follows:—Mason, J. M'Donald, Charlestown; carpenter, Thom, Elgin; plasterer, Anderson, Elgin; slater, Findlay, Keith; plumber, J. Gordon, Elgin; painter, Brown, Elgin; glazier, M'Donald, Aberdeen; sculptor, Goodwillie, Elgin. The building, which is after a plan by Mr. Petrie, architect, Elgin, is, according to the *Elgin Courier*, to be in the Norman style, in order to be in keeping with the tower, and is to contain sittings for from 700 to 800,—about 200 more than the former church.

Callander Free Church.—This church has been re-opened, for public worship, by Dr. Beith, of Stirling. The church is built from designs furnished by Mr. G. P. Kennedy, of Glasgow. The building is in the Italian style, to correspond with a tower attached to the west gable, which was built a few years ago. The roof is ceiled and arched. It is ornamented with five ribs panelled over each pilaster, which are coupled, and form the supports between the windows. The windows also are coupled, with circular heads. The end window—which is filled with stained glass, the gift of a member of the congregation,—is triple, and about 21 feet by 16 feet. The breadth is 54 feet, and the length 71 feet. The building, which is of freestone, will accommodate 700 persons.

SCHOOL-BUILDING NEWS.

Guernsey.—The rector of St. Sampson's parish is submitting to his parishioners the desirability of making an infant school in that parish out of the old parish one, which is not now used for educational purposes.——A school for children is being built at the Castle, Guernsey. It originated with the Misses Carey, so as to make their endeavours more permanent and useful. It has been determined to erect a plain and commodious edifice. The cost is estimated at 416*l*. The price of the ground is 40*l*. A wall 6 feet high round the premises is a condition made by the person from whom the ground was bought. It is proposed to place it in connection with the National Society, and hereafter, if possible, under the inspection of the Committee of Council on Education.

Kinnersley (Hereford).—The new schools at Kinnersley have recently been formally opened. The building consists of a school-room, 32 feet by 17 feet, by 25 feet high, with spacious entrance-porches for boys and girls. The materials used are red brick, the windows and other openings being relieved with stone and bricks of a darker colour. The roof to school-room is of open timber work. The amount expended, exclusive of site, has not exceeded 300*l*. The architect is Mr. John Clayton; the builder, Mr. Evans, of Kinnersley.

CASES UNDER METROPOLITAN BUILDING ACT.

THE 1862 EXHIBITION BUILDING.

MR. JOHN KELK, one of the contractors for the erection of the intended International Exhibition of 1862, in South Kensington, appeared before Mr. Ingham, at the Hammersmith Court, on Monday, to answer the complaint of Mr. T. L. Donaldson, district surveyor of South Kensington, for unlawfully commencing a building on the north side of the Cromwell-road before giving two days' notice thereof, as required under the 13th section of the Metropolitan Building Act.

The complainant's case was as follows:—The building in question was intended to form part of the Great Exhibition of 1862, as the picture-gallery, and was one which required the supervision of the district surveyor. Under the 6th section of the Act certain buildings were exempted, and it was contended that this was not one of this description. It was also contended that public buildings came under the supervision of district surveyors, as fireproof staircases, &c., were required.

Mr. Ingham inquired what was done on the former occasion, when the Great Exhibition was erected in Hyde Park.

Mr. Donaldson could not answer that question. He said it was built on Crown lands, and before this Act was passed.

Mr. Ingham said that, according to the Act, Crown lands were not exempted.

The defendant, on being called upon for his answer, said he had not come prepared to argue the question in a legal point of view, as there had not been time to summon the Commissioners together, for them to consider what course should be taken. He attended for the purpose of asking for a postponement.

Mr. Ingham was ready to grant the application, and said that it appeared to him there was an omission in the Act, as it never could have been intended that a building of this nature should come under the supervision of a district surveyor; but, as the Act stood, it seemed that it did.

The defendant said if Mr. Donaldson had waited a week longer the consent of the Metropolitan Board of Works would have been obtained. In certain cases the Board had power to take away the control of the district surveyors, and he would mention the instance of his building the new Horticultural Gardens adjoining the intended Exhibition. He was the contractor for that building; and the Board had authorized him to execute the works without the supervision of the district surveyor. The Exhibition of 1862 could never take place if it came under the supervision of the Building Act; and he simply attended that day to ask for an adjournment for the case to be settled in the same way as the horticultural building.

Mr. Donaldson denied that he had no authority over the horticultural building; and said he had caused some alterations to be made. What Mr. Kelk referred to was certain special powers.

Mr. Ingham said the question had better stand over, and asked what time would suit them.

Mr. Donaldson wished for a short adjournment, as the building was going on. He said there were certain things being proceeded with which could not be allowed. If they went on and were condemned, the defendant would have to pull them down; and therefore the sooner the question was settled the better for Mr. Kelk.

The defendant said an opinion had been obtained; and it was to the effect that the building was lifted out of the Act by the 56th section.

Mr. Ingham suggested that the summons should be adjourned for the application to the Metropolitan Board, and recommended the defendant to be careful of his right to proceed with the building, as he might find, after spending a large sum of money, that he would have to pull down the works he had erected.

The summonses were then adjourned for a fortnight.

THE ARCHITECTURAL ASSOCIATION.

THE ordinary meeting of members was held on Friday evening (the 4th inst.), at the house in Conduit-street; the President (Mr. T. Roger Smith) in the chair.

The President brought under the notice of the meeting the circular of the Northern Architectural Association, containing the outline of a scheme for forming an architectural alliance, to embrace all the architectural bodies now in operation in the United Kingdom, and to give facilities for the formation of new local societies.

A desultory conversation ensued, in the course of which the merits of the scheme were discussed, paragraph by paragraph, and a general opinion elicited in favour of the project.

It was ultimately agreed to refer the communication to the committee, with a request that they would report upon it to the next general meeting (on the 18th inst.).

Mr. Blashill then brought under the consideration of the meeting the report on the registry. It recommended that a register containing the names of assistants requiring employment, or of employers requiring assistants, should be kept at the head-quarters of the Association, and should be in charge of an officer paid for that purpose; that it should be open free of charge; and that applicants should furnish the Association with certain particulars as to age, previous employment, acquirements, &c.

Mr. Capes said that the report was substantially in accordance with the suggestions which had been offered on the subject some time ago. In his opinion, it was most desirable that the register should be kept at the usual place of meeting of the Association.

The recommendations contained in the report were discussed at some length. The general feeling of the meeting was in favour of a system of registry; but several members pointed out what, in their opinion, were the difficulties incidental to the system. The main question discussed was as to whether the Association should take upon itself to communicate with the past employers of assistants, with a view to corroborating the representations made on the face of the register; or whether it should content itself by submitting to applicants for assistants such information as it had itself received; leaving it to the former to institute any personal inquiries they might think fit.

The report was eventually received and substantially adopted, but referred back to the committee to make certain modifications with reference to the latter point.

Some other business of a routine character was discussed and disposed of, and the meeting adjourned until the 18th inst.

Books Received.

Quips and Cranks. By THOMAS HOOD. London: Routledge, Warne, & Routledge, Farringdon-street. 1861.

IT is very questionable whether the son of a great writer enters the arena of literature under auspices which, on the whole, can be said to be either decidedly favourable or decidedly unfavourable. "Comparisons" are but too apt to be "odious" in such cases, and adverse to the new literary aspirant; while, on the other hand, a grateful recollection of the father's excellencies is no less apt unduly to overlay and put out of sight the shortcomings and faults of his successor. Therefore, everything considered, perhaps it is a mistake to regard a new author with the old and familiar name as being anywise differently situate from other young authors of his class. This is our own feeling in the matter; so that we flatter ourselves that we can quite fairly and impartially judge of the merits of such works as "Quips and Cranks;" and a critical examination of it under all these neutralizing and equilibriating circumstances induces us to feel that "Thomas Hood the Younger" bids fair shortly to convince the public that at least the skirt of the glowing mantle with which "Thomas Hood the Elder" was arrayed is descending on him. "Quips and Cranks" is a really genial, able, and humorous production; and Mr. Hood appears to be getting no less skilful with his pencil than with his pen. Some of his "cuts" are worthy of a place side by side with those of *Punch*, and that is no small praise; and that the "young idea" will "shoot" there is pretty clear internal evidence; and of which desirable result, too, we may accept as a favourable omen the genial literary and art Cupids (if we are so to regard them) who, in the frontispiece, are sharpening their pen-feathers and their crayons at the literary grindstone, striking off "quips and cranks" in sparks and flashes, as they laughingly get on with their work.

With our contemporaries, we give Thomas Hood the Younger a hearty welcome.

Pamphlets issued and distributed by the Ladies' Sanitary Association.

THE Ladies' Sanitary Association must be doing good worth speaking of by means of their numerous little tracts on sanitary and other cognate subjects, of which no less than 76,000 were issued by the Association down to the end of last year, and widely circulated, not only by the Association, but by many clergymen, district visitors, hospital managers and physicians, and other labourers among the poor. The committee have experienced some difficulty in obtaining suitable manuscripts for tracts; and, in the third annual report of the Association, it is stated that most valuable assistance would be rendered to the committee, if publishers and authors of sanitary books would kindly forward specimen copies, or the titles, to the secretary; and Miss Florence Nightingale, Drs. Acland, Druitt, Wyld, and other friends, are thanked for their aid in presenting copies of their sanitary works.

Among the tracts already published is one on "Healthy Dwellings, and Prevailing Sanitary Defects in the Homes of the Working-Classes," by Mr. Henry Roberts, which formed the subject of a lecture delivered at the South Kensington Museum, and was printed in the *Builder*. Various other lectures have been and are to be given at the instance of the Ladies' Sanitary Association. The titles of a few of the tracts already issued we may here note, in order to show more fully what this active and useful association of ladies is doing:—"The Worth of Fresh Air;" "The Cheap Doctor,—a Word about Fresh Air;" "The Use of Pure Water;" "The Value of Good Food;" "The Influence of Wholesome Drink;" "The Power of Soap and Water,—a Dream that came true;" "When were you Vaccinated?" "The Sick Child's Cry, and other household Verses on Health and Happiness;" "How to Manage a Baby;" with engravings [Let those who feel inclined, as some do, to smile at a tract so important and useful as one on Infant Management, remember that it is of the efforts of a ladies' sanitary association they are thinking so lightly—and so stupidly: what subject can be more appropriate (so appropriate we had almost insisted on saying) than one just such as this for such an association to issue?]; "Work and Play;" "Household Verses for the Children;" "The Health of Mothers," with engravings, &c.

The good work in which the Ladies' Sanitary Association are so judiciously and diligently engaged has our warmest wishes in its favour.

The publications of the Association, we may here note, can be had at their office, 14A, Princes-street, Cavendish-square, W.; and they are sold for the Association by Jarrold & Sons, 47, St. Paul's-churchyard, E.C.

Miscellanea.

MORE OF MEMPHIS.—M. Mariette is said to have made a new and important discovery in the ruins of Memphis. This new discovery, according to the *Athenæum*, consists of a list of sixty-three Egyptian kings, engraved on limestone. The Paris Library and the British Museum are in possession of similar tablets, but they are not nearly so complete, it appears, as the one lately discovered, which is to find its place in the new museum in Egypt. This tablet of Memphis, it is conceived, will determine the Egyptian dynasties of the ante-pyramidical period.

WORKED CORNISH GRANITE—The pedestal for the equestrian statue of the late king Carlo Alberto has been shipped at Falmouth, in the *Pride of the Isles*, for Genoa, *en route* for Turin. It is the produce of the parish of Mabe, and consists of three courses of polished fine grit granite, the bottom and top forming moulded base and cornice, and the middle course of plain polished surfaces, about four feet high. Each stone has been sunk by great labour out of the solid, so as to leave a bold projection in the form of a buttress at each angle. The entire mass consists of six stones in all 21 feet long, and six stones, in all 13 feet long, and so arranged as to avoid the appearance of any joint. When fixed in the wharf before shipment, it had the appearance of one massive block of polished granite, 26 feet long, 17 feet wide, and 7 feet high. The material was raised by Messrs. Freeman, at their quarries, and polished at their works at Penryn, where they are engaged at present in preparing a set of polished columns of granite for the temple or mausoleum at Frogmore, in which the remains of the late Duchess of Kent are to be finally deposited.

MONUMENT TO WATT AT GREENOCK.—It has been suggested that the erection about to be put up in the centre of Cathcart-square, as a well and fountain, should be a monument to James Watt, who was a townsman of Greenock.

NEW FOREIGN-OFFICE.—Mr. Tite having asked the First Commissioner of Works in the Commons whether the plans and designs for the Foreign and Indian offices were determined upon, Mr. Cowper said Mr. Scott, the architect of the new Foreign-office, had, at his desire, prepared a new elevation of that building, which would be exhibited in one of the committee-rooms before the House was called upon to consider the estimates.

TAUNTON SCHOOL OF ART.—The annual examination of the drawings of the Taunton School of Art has been made by Mr. G. R. Wyld, Government Inspector. The school has now been in existence five years; and, through the exertions of the committee and secretaries, and the head master, Mr. Gunn, it occupies a high position among similar institutions. The number of pupils connected with it is 350. The inspector awarded twenty-two medals to students in the various stages, although he made his visit at an unexpected time.

THE "CROOKED SPIRE" OF CHESTERFIELD PARISH CHURCH.—The crooked spire of the fine old parish church of Chesterfield is an architectural curiosity known throughout the kingdom; but of late its safety has been much jeopardised by several shocks of lightning; the spire having been struck not less than three times within twelve months; and on the last occasion the electricity occasioned a fire, which might have ended in the destruction of the whole building. Messrs. Marsden and Mason, churchwardens, have decided (and full time too) upon having erected on the spire a lightning conductor. The kind chosen is one of the copper octagonal tubular conductors, patented by Mr. J. Brown, of Sheffield, builder. Three of the workmen of Mr. Brown secured a plank through the "crow hole" of the spire, on which the foot of a ladder rests: other ladders are laced together until the vane of the spire is reached. Mr. Seaton, plumber, has been engaged in the dangerous task of glazing the illuminated dial of the clock, portions of which were broken by the late storm. He was suspended in a chair, which was supported from the spire by means of ropes and blocks.

WINDSOR CASTLE IMPROVEMENTS: THE OLD TOWERS.—Now that the Hundred Steps are completed and reopened to the public, says the *Windsor Express*, a neat lodge erected at the bottom next the town, and the various restorations effected in the neighbouring ecclesiastical houses,—brick giving place to stone of a durable nature, mostly from Hughendon Heath, near Wycombe, with alternate rows of flint intermixed, though in a style which all may not approve of,—an arrangement of scaffold-poles round the old Garter Tower, on the western side of the Castle, nearly opposite to the Great Western station, with sundry holes made ready for others, is strongly suggestive that this part is next to be operated on. Having now stood since the days of Henry III.,—some full six hundred years,—it will wear a new face, with all its familiar features—wrinkles though they be—taken away. Those who object to the manner in which the present restorations have been carried out (says the same paper) will do well to remember that, in the olden views of the Castle, the towers were chiefly quadrangular, most of them having a smaller quadrangular tower attached, carried above the level of the greater tower; and, in many instances, these smaller towers were surmounted by a turret, with a leaden bell-shaped cap or dome. The cupola of the belfry tower is the only instance remaining of such excrescence; but the peculiar features of the other towers have been perpetuated in these restorations. In reply to a question put in the Commons, on the 2nd instant, by Sir H. Willoughby, in regard to the restoration of the belfry or "Julius Cæsar" tower, which he erroneously spoke of as two towers, Mr. Cowper replied that, although it had been found necessary to recase a large portion of the external wall of Windsor Castle, he was glad to say that that process had not become necessary in the case of the tower called the belfry tower, which was built in the reign of Henry III. The walls of that portion of the Castle were so thick that, if decay continued to progress at the rate that it had hitherto done, a period of about 1,200 years would probably elapse before recasing would become necessary. He had impressed upon the architect who had charge of the repairs, the necessity of preserving, as far as possible, the ancient character of the buildings, and he thought the matter might be safely left in that gentleman's hands.

EXHIBITION IN PAINTERS' HALL.—According to the *City Press* the court of the Painters' Company have elected the following gentlemen judges at the approaching exhibition of decorative art:—From the court, Mr. Thornton, of Great Carter-lane; Mr. Morant, of Bond-street; Mr. Sewell, of Aldersgate-street. From the trade, Mr. Simpson, of West Strand, and Mr. Hayward, of Newgate-street.

OXFORD SANITARY ASSOCIATION.—The promoters of this Association have adopted a very wise mode of bringing its objects and intentions before the public, and especially before the humbler classes, by instituting a series of Free Public Lectures. The first of the series was delivered on Friday, the 26th ult., by Dr. Acland, "On the Elements of Sanitary Knowledge." Dr. Acland endeavoured to sketch out the three great divisions of sanitary knowledge:—1st, the knowledge of the human frame; 2nd, the knowledge of what a man ought to do for his own health; and, 3rd, to show that what a man could not do for himself the State ought to help him to do.

BRADFORD SCHOOL OF ART.—The annual meeting of the friends of this Institution has just been held. The president, Mr. A. Harris, jun., who occupied the chair, stated, in his speech, that, while acknowledging the support of those who have aided them in their efforts, the committee had to regret in other quarters an amount of coldness and indifference which they were hardly prepared to expect. He appeared to allude especially to the manufacturers and merchants, the very class who are likely to be first benefited by improved taste in art. There are 150 pupils, however, at present receiving instruction, exclusive of those—between 50 and 100 in addition—who are receiving tuition in private schools; so that there are already rather more than 200 pupils now receiving instruction from this school. Mr. Ruskin awarded the prizes of the current year, which were presented at the annual meeting.

MANCHESTER ARCHITECTURAL ASSOCIATION.—A meeting of this Association was held on Wednesday evening, May 1, the Vice-President in the chair. Mr. Henry Fisher read the paper for the evening, "On Chemistry in relation to Building." After noticing the small attention usually devoted to chemistry in the education of the architect, the essayist referred to the action of the weather and other influences on the various materials used in building, and pointed out some methods for preventing the decay and dilapidation which result from this cause. He described several reactions which take place during the setting of mortar, cements, &c., and called attention to the fact, that slate and stone are the only two materials used in the exterior of modern buildings in a natural state unprotected from the weather, and that it appears probable that the coating of one of these with some impervious preparation will ere long be deemed indispensable in all cases where durability is desired. Among other means of preserving stone he alluded to the generally received opinion that this end is attained by setting it on its natural or quarry bed; and showed that in many cases stone bedded vertically offers more resistance to the penetration of damp, and is therefore preferable.

PERFUME VAPORIZER.—A simple apparatus, capable of being made very useful as a sanitary agent, as well as for the diffusion of merely pleasant odours through apartments, hospitals, halls, theatres, &c., has been invented by Mr. E. Rimmel, the well-known perfumer. It consists of a vessel heated by a small lamp below it, and intended for the vaporization of steam impregnated with the odours of flowers, aromatic vinegar, or other acids, and sanitary agencies, such as chlorine, ammonia, &c. Even some perfumes are believed to act not merely as ministrants to luxury or pleasure, but as sanitary agents; by, it is believed, ozonizing the oxygen of the atmosphere, and so converting it into true *vital* air; and one essential oil we particularly know of, namely oil of cloves, which, though heavy as a mere perfume, has a very singular power of destroying musty mould, as in paste or gum, for example; and keeping it sweet and fresh for months; while, otherwise, in a few days it would be utterly useless. Such an agency, diffused by Rimmel's vaporizer, in close and musty apartments, could not but sweeten them; but the choice of perfumes and such like is endless. Dr. Hassall, who, with Dr. Letheby and others, recommends this apparatus as a useful sanitary agency, states that, if even the delicate flower-leaves of the violet or rose be thrown into the vaporizer, their scent will be diffused throughout a room without any of that acrid and offensive empyreumatic odour which is so apt to accompany the *combustion* of perfumes, as on the burning of incense or pastiles.

NORTHAMPTON TOWN HALL COMPETITION.—Considerable dissatisfaction is expressed in consequence of the selection of a design, the cost of which it is stated will greatly exceed the sum named by the Committee as the limit. Of the injustice of this, if the statement be correct, of course there can be no doubt. We shall probably hear more of it.

THE LATE MR. JOHN CROSS, HISTORICAL PAINTER.—The death of Mr. John Cross, author of "The Clemency of Cœur de Lion" (a picture now in the New Palace of Westminster), induced a number of his friends, (as we mentioned some time ago), to take measures for raising a fund by subscription to purchase one or more of his unsold works (viz., "The Burial of the Princes in the Tower," "The Death of Thomas à Becket," or "The Coronation of William the Conqueror"), for presentation to some public institution, as a tribute to his memory as an artist, and as a means of rendering assistance to his widow and four children, otherwise totally unprovided for. Mr. J. H. Foley, R.A., has taken an active interest in the movement, and an influential and numerous committee of patrons and lovers of art has been formed. Subscriptions will be received at the London Joint-Stock Bank, Western Branch, Pall-mall, to the account of Mr. Edward Armitage, 2, Hall-place, St. John's-wood; or by any member of the committee. The art-works just named, and others by the late Mr. Cross, will be exhibited at the Great Room of the Society of Arts, Adelphi, from May 6th to the 24th. Admission free, daily, from ten till four.

THE SALE AT THE EAST-INDIA HOUSE, LEADENHALL-STREET.—On the outward walls of this once central office of the East-India House, large placards, announcing the sale of its internal fittings, have for some time past been plentifully displayed. The carpet was hung out of the window, and the auctioneer's hammer has for days been heard, above the bustling noise of feet, and the voices of many bidders. There were iron staircases for sale, powerful fire-engines, lead in large quantities, about 200,000 feet of panelling, carpets, and other matters, too numerous to mention. In about a fortnight all these will be cleared off, and the building, of stately appearance, and at present in substantial condition, will be left, stripped of all unnecessary fixtures. The valuable library and the museum have, as we are told, been carefully removed to Westminster, so that there is now a great edifice, one of the "Lions of London," ready for a fresh use. The site is valuable, so is the building. With good management the interior might be easily altered so as to serve, in this central position, for several business purposes; it is, therefore, probable that the now well-known East-India House may for long remain as one of the architectural features of the metropolis. Charles Lamb would have been surprised if the present state of affairs had been suggested to him.

THE VICTORIA BRIDGE AT PIMLICO.—The *Engineer* says,—"It is rumoured that both the roadway and the piers of this structure, completed a few months ago at a cost of nearly 100,000*l.*, are exhibiting signs of weakness. This bridge has, besides a number of short spans in the approaches, four wrought-iron segmental arches of 175 feet span each, there being three piers in the river. After the completion of the work, the piles, we believe, which had served as an enclosure to the piers, were withdrawn, leaving the foundations of the bridge exposed to the scour of the river. From the nature of the bottom, we should suppose that all the protection which the original piles (sawn off below water) could have given, would have been necessary. The arches themselves are formed each of six wrought-iron plate ribs, arranged in three pairs, two pairs being placed so as to form the outsides of each span, while the other pair extends along the centre. These arched ribs are each about 4 feet deep, and, perhaps, half an inch thick, although they do not appear to the eye to be more than three-eighths of an inch thick. Flanges are riveted on both top and bottom. The spandrils are made of T-iron riveted together in a sort of latticework. Over the spandrils horizontal plate beams are placed, with their upper surfaces level with the crown of the arch, so as to complete the horizontal line of the roadway. The latter is carried upon rolled wrought-iron cross beams, each about 11 feet long and 9 inches deep, and spaced about 3 feet apart. The ends of these beams abut against the inner vertical surfaces of the arched ribs and horizontal beams over the spandrils. The fastening of these ends to the ribs is one of the most wretched 'cobbles' to be found in bridge construction."

THE STATUE OF WILLIAM IV., NEAR LONDON BRIDGE.—With reference to remarks at a recent discussion, a "Subscriber" wishes it to be remembered that the statue of William IV., at the junction of King William and Gracechurch Streets, was executed by the late Mr. Nixon, a most promising sculptor. The statue, he says, caused him many a painful hour, from the inadequate remuneration he received for it. The same sculptor executed four statues of the Seasons, for the Goldsmiths' Hall, introduced in the staircase.

THE WELLINGTON MONUMENT AT LIVERPOOL. On the anniversary of the birth of the late duke, the first stone of the Liverpool monument to his memory was laid, on the site in Islington Old Market. The statue, says the *Journal*, will be placed upon a column, with foundations of Runcorn stone, each block being about 3 tons in weight. The base will be formed by three courses of granite, with steps set back. The pedestal will be 15 feet square, with a panel on each side for inscriptions. The column will be of Darley Dale stone, fluted, and from base to capital its length will be 81 feet. The height of the column from the ground to the figure will be 115 feet. The statue, which represents the duke in his uniform as Field Marshal, will be 12 feet in height. The column, which will be 10 feet in diameter at the bottom, and 8 feet 9 inches at the top, will be solid throughout. The architects are Messrs. A. & G. A. Lawson, of Glasgow. Messrs. Holme & Nicol are the contractors. The total cost of the structure is estimated at about 7,000*l.*; and it is hoped that in twelve months it will be completed. Mr. R. Gray is clerk of the works.

WORKING MEN'S EXCURSION TO PARIS.—A public meeting to promote the success of the working men's excursion to Paris has been held in the Whittington Club, Arundel-street, Strand. Mr. Layard, M.P., presided. The room was crowded. The Chairman said he cordially approved of the excursion. There was a great deal to be seen in Paris, and the working men, *if they used their opportunities properly*, might learn a great deal by visiting the French capital. In Paris, for example, he understood the dwellings for working men were paying—speculations, and it would be for the excursionists when they saw them to form some idea whether they answered, and whether the principle on which they were erected might not be extended to this country. The excursion was in no way connected with politics. He disapproved of Mr. Klotz Rowsell's volunteer excursion; but Mr. Rowsell had nothing to do with the excursion about to be organised, and it had no connection with the volunteer movement. Mr. Layard, in a friendly manner, advised the excursionists to conduct themselves in a manly and gentlemanly manner. He was, he said, pleased that ladies were to be of the party. He intended himself to join the excursionists.—Addresses were afterwards delivered by Messrs. Merriman, Blanchard Jerrold, and Passmore Edwards.—Mr. Cooke explained, at some length, the business details of the excursion, and the following resolution was, with great enthusiasm, adopted:—"That the excursion of the working men of this country to Paris is eminently calculated to promote good fellowship between the people of the two countries; and this meeting believing that the organisation of the working men's committee offers great facilities, highly recommends its programme to public acceptance."

TENDERS

For a mansion at Blackmore Park, Malvern, for Mr. J. V. Hornyold. Mr. David Brandon, architect:—

J. & C. I'Anson	£18,446 0 0
George Smith	16,910 0 0
Wood & Son	15,970 0 0
Lucas, Brothers	15,100 0 0
Myers	14,503 0 0

For additions and alterations to Union Chapel, Compton-terrace, Islington. Messrs. Lander & Bedall, architects:—

Woodward	£3,464 0 0
Tolley	3,445 0 0
Perry	3,242 0 0
Greenwood	3,237 0 0
Smith	3,208 0 0
Stephenson	3,165 0 0
Mann	2,918 0 0

For chimney-shaft, Old Gravel-lane, for Messrs. Knight & Sons. Mr. Andrew Wilson, architect:—

Langtree	£344 0 0
Johnstone (accepted)	307 0 0

For building a parsonage-house at Langford, near Newark, Notts. Mr. Goddard, Lincoln, architect:—

Milner	£1,192 0 0
Stiles & Robinson	1,075 0 0
Clipsham	1,025 10 0
Mackenzie	1,025 0 0
Fox (accepted)	1,020 0 0

For villa residence at Leytonstone, Essex, for Mr. Richard Carpenter. Mr. Andrew Wilson, architect:—

Joshua Wilson	£1,080 0 0
Morter	983 0 0
Rivett	972 0 0
Palmer	945 0 0
Tarrant	940 0 0
Perry	894 0 0
Warskitt (accepted)	892 10 0

For building a house at Hastings, for Mr. R. R. Roberts. Mr. Henry Carpenter, architect. Quantities by Mr. Crocker:—

Kenward	£2,075 0 0
Parks	1,930 0 0
Colls & Co.	1,897 0 0
Jones	1,894 10 0
Howell	1,850 0 0
Harman	1,735 15 0

For building schools, residences, offices, &c., at St. John's, New Windsor, Berks. Mr. Street, architect. Quantities supplied by Mr. C. Balam:—

Wright	£6,258 0 0
Symm	5,847 0 0
Mole	5,616 13 0
Lawrence	5,200 0 0
Sharpington & Cole	4,997 0 0
Perry	4,995 0 0
Bowley, Brothers	4,968 0 0
Myers	4,939 0 0
Hollis	4,890 0 0
Fassnidge & Son	4,489 0 0

For the erection of a villa residence, stables, &c., at Westwood, near Leeds, for Mr. Henry Oxley. Mr. William Hell, architect, Leeds:—

For Mason's and Bricklayer's Work.

J. & B. Pounder	£1,572 0 0

For Carpenter's and Joiner's Work.

T. Hall & Co.	£819 0 0

For Plasterer's Work.

J. Wilson & Son	£166 18 0

For Plumber's and Glazier's Work.

T. Story	£325 10 0

For Slater's Work.

W. Ellis	£138 18 4

For Painter's Work.

F. Jackson	£30 10 0
Total	£3,052 16 4

For re-decorating Canterbury Hall and improving the ventilation, for Messrs. Morton & Stanley. Mr. Samuel Field, architect. Quantities supplied:—

I'Anson	£866 0 0
Sanderson	821 10 0

For two pairs of model cottages at Hertford, for the Hertford Cottage Building Society. Mr. Sextus Dyball, architect:—

Elliott	£877 0 0
Cook	600 0 0
Collins	590 0 0
Andrews	560 0 0
Dearsley	499 0 0
Ekins & Sons (accepted)	499 0 0

For erecting and finishing a new house at Streatham, for Mr. D. Norton. Mr. R. W. Drew, architect. Quantities supplied by Mr. J. A. Bunker:—

Downs	£1,620 0 0
Hill	1,594 0 0
Deacon	1,395 0 0

For the erection of two houses in Camberwell-grove (re-using old materials), for Mr. John Margetson. Mr. George Elkington, architect:—

Wills	£1,075 0 0
Wells	1,065 0 0
Thompson	980 0 0
Acock (accepted)	770 0 0

For new warehouse, No. 11, Warwick-square, Newgate-street. Messrs. Young & Son, architects. Quantities supplied by Mr. C. T. Shoppee:—

Brass	£1,440 0 0
King	1,420 0 0
Hardiman & Sandon	1,387 0 0
Perry	1,335 0 0
Chessum	1,299 0 0
Coleman	1,289 0 0
Hart	1,285 0 0

For alterations and repairs to premises "The Star," City-road, for Mr. John Keast. Mr. H. J. Hammond, Finsbury-square, architect:—

Brown	£844 0 0
Woods & Son	833 0 0
Harrup & Son	823 0 0
Conder	799 0 0
Wills	785 0 0
Macers	777 0 0
Anley	712 0 0
Abbot & Hopwood	712 0 0

For proposed industrial school in Redcross-street, Cripplegate, City, for the Trustees of Lady Holles's Schools. Mr. J. Foster Pickering, architect. Estimates taken in two ways. First, Portland stone principal elevation; second, lower portion in Portland stone, upper in Portland cement. The site has a frontage of 64 feet, and the building is to be about 50 feet high. The lower portion, above referred to, is 14 feet high. Quantities by Mr. Enoch:—

	Portland Stone.	Portland Cement.	Difference.
Prince	£3,787	£3,288	£499
Turner & Sons	3,637	3,245	392
Lawrence & Sons	3,580	3,180	400
Larke	3,420	2,932	488
Brown & Robinson	3,400	3,032	368
Hack & Sons	3,367	3,057	310
Brass & Sons*	3,237	2,922	315

* Accepted in Portland stone.